PB85-127330

Water Resources Data for New Jersey
Water Year 1983. Volume 1. Atlantic
Slope Basins, Hudson River to Cape May

(U.S.) Geological Survey, Trenton, NJ

Jul 84

U.S. Department of Commerce
National Technical Information Service
NTIS

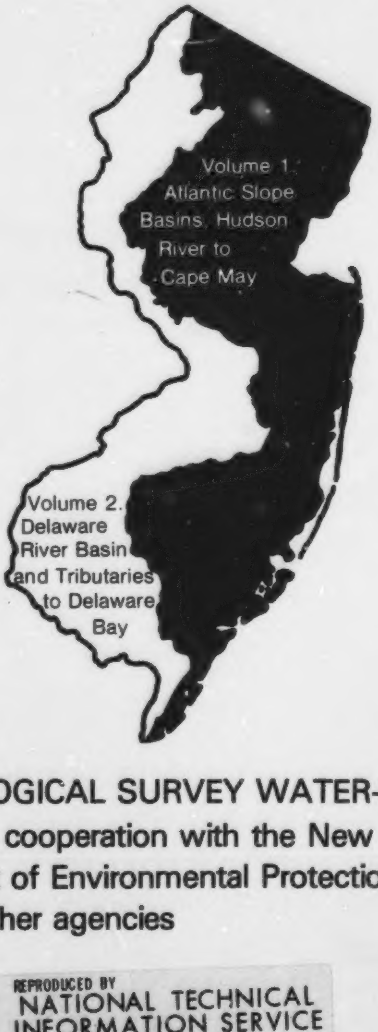
PB85-127330

U.S. DEPARTMENT OF THE INTERIOR
March 3, 1849

THE GREAT SEAL OF THE STATE OF NEW JERSEY

Water Resources Data
New Jersey
Water Year 1983

Volume 1. Atlantic Slope Basins, Hudson River to Cape May


Volume 1. Atlantic Slope Basins, Hudson River to Cape May
Volume 2. Delaware River Basin and Tributaries to Delaware Bay

U.S. GEOLOGICAL SURVEY WATER-DATA REPORT NJ-83-1
Prepared in cooperation with the New Jersey
Department of Environmental Protection
and with other agencies

REPRODUCED BY
NATIONAL TECHNICAL
INFORMATION SERVICE
U.S. DEPARTMENT OF COMMERCE
SPRINGFIELD, VA. 22161

CALENDAR FOR WATER YEAR 1983

1982

OCTOBER

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

NOVEMBER

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

DECEMBER

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

1983

JANUARY

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

FEBRUARY

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28					

MARCH

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

APRIL

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

MAY

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

JUNE

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

JULY

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

AUGUST

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

SEPTEMBER

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

March 3, 1849

United States Department of the Interior

GEOLOGICAL SURVEY
Water Resources Division
Room 418, Federal Building
402 East State Street
Trenton, New Jersey 08608

I am pleased to announce the release of our annual report, "Water Resources Data for New Jersey, Water Year 1983". This report was prepared by the U.S. Geological Survey, in cooperation with the State of New Jersey and several local and federal government agencies.

Once again this year, the report is issued in two volumes: Volume 1.--Atlantic Slope Basins, Hudson River to Cape May; Volume 2.--Delaware River Basin and Tributaries to Delaware Bay.

The report contains records of stream discharge and water-quality measurements, elevations of lakes and reservoirs, major water-supply diversions, and tidal elevations. Also included are records of sediment concentrations and records of ground-water quality and ground-water levels. Special sections are devoted to low-flow and crest-stage data and summaries of tidal crest elevations in the New Jersey estuaries and intracoastal waterways.

Copies of this report are for sale through the National Technical Information Service, 5285 Port Royal Road, Springfield, Virginia 22161. When ordering, refer to U.S. Geological Survey Water-Data Report NJ-83-1 (for Volume 1) and NJ-83-2 (for Volume 2). For further information on this report, or if the address on the mailing label has changed, or if you no longer desire to receive this report, please contact me at the above address or telephone (609) 989-2162.

Sincerely,

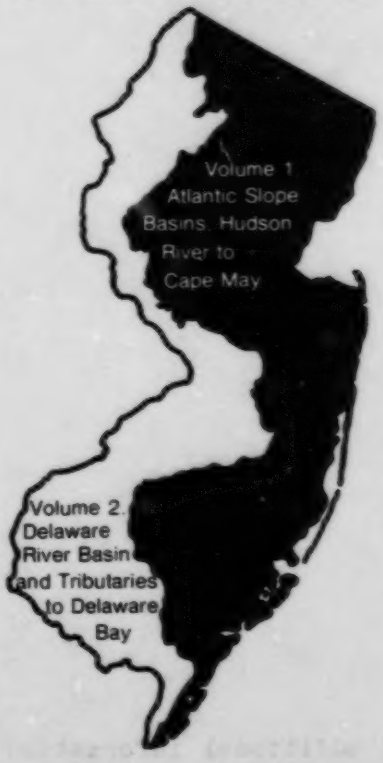
William R. Bauersfeld
William R. Bauersfeld, Chief
Hydrologic Studies Section

U.S. DEPARTMENT OF THE INTERIOR
March 3 1849

Water Resources Data New Jersey
Water Year 1983

Volume 1. Atlantic Slope Basins, Hudson River to Cape May

by W.R. Bauersfeld, E.W. Moshinsky, E.A. Pustay, and F.L. Shaefer


Volume 1
Atlantic Slope Basins, Hudson River to Cape May
Volume 2.
Delaware River Basin and Tributaries to Delaware Bay

U.S. GEOLOGICAL SURVEY WATER-DATA REPORT NJ-83-1
Prepared in cooperation with the New Jersey Department of Environmental Protection and with other agencies

UNITED STATES DEPARTMENT OF THE INTERIOR

WILLIAM P. CLARK, Secretary

GEOLOGICAL SURVEY

Dallas L. Peck, Director

For additional information write to

District Chief, Water Resources Division
U.S. Geological Survey
Room 418, Federal Building
402 East State Street
Trenton, New Jersey 08608

1984

PREFACE

This volume of the annual hydrologic data report of New Jersey is one of a series of annual reports that document hydrologic data gathered from the U.S. Geological Survey's surface- and ground-water data-collection networks in each State, Puerto Rico, and the Trust Territories. These records of streamflow, ground-water levels, and quality of water provide the hydrologic information needed by State, local, and Federal agencies, and the private sector for developing and managing our Nation's land and water resources. Hydrologic data for New Jersey are contained in 2 volumes:

Volume 1. Atlantic Slope Basins, Hudson River to Cape May
Volume 2. Delaware River Basin and Tributaries to Delaware Bay

This report is the culmination of a concerted effort by dedicated personnel of the U.S. Geological Survey who collected, compiled, analyzed, verified, and organized the data, and who typed, edited, and assembled the report. In addition to the authors, who had primary responsibility for assuring that the information contained herein is accurate, complete, and adheres to Geological Survey policy and established guidelines, the following individuals contributed significantly to the collection, processing, and tabulation of the data:

E. Dorr	R.D. Schopp
R.L. Ulery	W.D. Jones
G.R. Kish	G.M. Farlekas

S.J. Perry and I.C. Heerwagen word processed the text of the report. Illustrations and maps drafted by G.L. Simpson.

This report was prepared under the general supervision of D.E. Vaupel, District Chief, New Jersey District, and S.P. Sauer, Regional Hydrologist Northeastern Region, and in cooperation with the State of New Jersey and with other agencies.

50272-101

REPORT DOCUMENTATION PAGE

1. REPORT NO. USGS/WRD/HD-84/053

2.

3. Recipient's Accession No. PB85 127330

4. Title and Subtitle
Water Resources Data for New Jersey, Water Year 1983
Volume 1. Atlantic Slope Basins, Hudson River to Cape May

5. Report Date July 1984

6.

7. Author(s)
W.R. Bauersfeld, E.W. Moshinsky, E.A. Pustay, F.L. Schaefer

8. Performing Organization Rept. No. USGS-WDR-NJ-83-1

9. Performing Organization Name and Address
U.S. Geological Survey, Water Resources Division
Room 418 Federal Building
402 E. State Street
Trenton, New Jersey 08608

10. Project/Task/Work Unit No.

11. Contract(C) or Grant(G) No.
(C)
(G)

12. Sponsoring Organization Name and Address
U.S. Geological Survey, Water Resources Division
Room 418 Federal Building
402 E. State Street
Trenton, New Jersey 08608

13. Type of Report & Period Covered
Annual - Oct. 1, 1982 to Sept. 30, 1983

14.

15. Supplementary Notes

Prepared in cooperation with the New Jersey Department of Environmental Protection and with other agencies.

16. Abstract (Limit: 200 words)

Water Resources data for the 1983 water year for New Jersey consist of records of stage, discharge, and water quality of streams; stage, contents, and water quality of lakes and reservoirs; and water levels and water quality of ground water. This volume of the report contains discharge records for 80 gaging stations; tide summaries for 1 station; stage and contents for 15 lakes and reservoirs; water quality for 68 surface-water sites and 82 wells; and water levels for 50 observation wells. Also included are data for 41 crest-stage partial-record stations, 17 tidal crest-stage gages, and 47 low-flow partial-record stations. Additional water data were collected at various sites, not part of the systematic data collection program, and are published as miscellaneous measurements. These data represent that part of the national water data system operated by U.S. Geological Survey and cooperating State and Federal agencies in New Jersey.

17. Document Analysis a. Descriptors

*New Jersey, *Hydrologic data, *Surface water, *Ground water, *Water quality, Flow rate, Gaging stations, Lakes, Reservoirs, Chemical analyses, Sediments, Water temperatures, Sampling sites, Water Levels, Water Analyses.

b. Identifiers/Open-Ended Terms

c. COSATI Field/Group

18. Availability Statement: No restriction on distribution. This report may be purchased from: National Technical Information Service, Springfield, VA 22161

19. Security Class (This Report) Unclassified

20. Security Class (This Page) Unclassified

21. No. of Pages 328

22. Price

(See ANSI-Z39.18) See Instructions on Reverse

OPTIONAL FORM 272 (4-77)
(Formerly NTIS-35)
Department of Commerce

CONTENTS

Page
Preface........III
List of surface-water stations, in downstream order, for which records are published........VI
List of ground-water stations, by county, for which records are published........VIII
Introduction........1
Cooperation........1
Acknowledgments........2
Hydrologic conditions........2
Definition of terms........2
Downstream order and station number........2
Numbering system for wells and miscellaneous sites........9
Special networks and programs........9
Explanation of stage and water-discharge records........10
  Collection and computation of data........10
  Accuracy of field data and computed results........11
  Publications........12
  Other data available........12
  Records of stage or discharge collected by agencies other than the Geological Survey........12
Explanation of water-quality records........12
  Collection and examination of data........12
  Water temperature........13
  Sediment........13
  Remark codes for water-quality data........14
  Publications........14
Explanation of ground-water level records........14
  Collection of the data........14
  Publications........15
Access to Watstore data........15
Selected references........15
Publications on techniques of water-resources investigations........19
Surface-water records........30
Discharge at partial-record stations and miscellaneous sites........239
  Low-flow partial-record stations........239
  Crest-stage partial-record stations........243
  Miscellaneous sites........249
Tidal crest-stage stations........255
Ground-water records........257
  Ground-water level records........257
  Quality of ground-water records........307
Index........316

ILLUSTRATIONS

Figure 1. Well locations system........9
2. Monthly streamflow at key gaging stations........20
3. Annual mean discharge at key gaging stations........21
4. Monthly ground-water levels at key observation wells........22
5. Map showing location of gaging stations, and surface-water quality stations........25
6. Map showing location of low-flow and crest-stage partial-record stations........27
7. Map showing location of ground-water quality stations and observation wells........29

TABLES

Table 1. Degrees Celsius (°C) to degrees Fahrenheit (°F)........13
2. Water-supply paper numbers, surface-water quality records, water years 1945-70........14
3. Water-supply paper numbers, ground-water level records, water year 1935-74........15
Factors for converting Inch-pound units to Metric units........inside back cover

SURFACE WATER STATIONS, IN DOWNSTREAM ORDER, FOR WHICH RECORDS ARE PUBLISHED

[Letter after station name designates type of data: (d) discharge, (c) chemical, (m) microbiological, (e) elevation, gage height or contents, (t) water temperature, (s) sediment]

Page

HUDSON RIVER BASIN

Rondout Creek:
Wallkill River at Franklin (cm) 30
Wallkill River near Sussex (cm) 32
Papakating Creek at Sussex (cm) 34
Black Creek (head of Pochuck Creek) near Vernon (cm) 35

HACKENSACK RIVER BASIN

Hackensack River at West Nyack, NY (d) 36
Hackensack River at Rivervale (dcm) 37
Pascack Brook at Westwood (d) 40
Hackensack River at New Milford (d) 41
Reservoirs in Hackensack River basin (e) 42
Diversions in Hackensack River basin 43

PASSAIC RIVER BASIN

Passaic River near Millington (dcm) 44
Passaic River near Chatham (dcm) 46
Rockaway River:
Green Pond Brook at Picatinny Arsenal (d) 49
Green Pond Brook at Wharton (d) 50
Rockaway River above reservoir, at Boonton (d) 51
Rockaway River below reservoir, at Boonton (d) 52
Rockaway River at Pine Brook (cm) 53
Whippany River at Morristown (dcm) 55
Whippany River near Pine Brook (cm) 58
Passaic River at Pine Brook (d) 60
Passaic River at Two Bridges (cm) 61
Pompton River:
Pequannock River (head of Pompton River) at Macopin intake dam (d) 63
Wanaque River at Awosting (d) 64
Wanaque River at Monks (d) 65
Wanaque River at Wanaque (dcm) 66
Ramapo River at Suffern, NY (d) 68
Mahwah River near Suffern, NY (d) 69
Ramapo River near Mahwah (dcm) 70
Ramapo River at Pompton Lakes (d) 73
Pompton River at Pompton Plains (d) 74
Pompton River at Packanack Lake (cm) 75
Passaic River at Little Falls (dcmts) 77
Saddle River at Ridgewood (d) 83
Hohokus Brook at Hohokus (d) 84
Saddle River at Fair Lawn (cm) 85
Saddle River at Lodi (dcm) 87
Third River at Passaic (d) 90
Reservoirs in Passaic River basin (e) 91
Diversions in Passaic River basin 94

ELIZABETH RIVER BASIN

Elizabeth River at Ursino Lake, at Elizabeth (dcm) 95

RAHWAY RIVER BASIN

West Branch Rahway River at West Orange (cm) 98
Rahway River near Springfield (dcm) 100
Rahway River at Rahway (dcm) 103
Robinsons Branch Rahway River at Maple Avenue, at Rahway (d) 105

RARITAN RIVER BASIN

South Branch Raritan River at outlet of Budd Lake (cm) 106
South Branch Raritan River at Middle Valley (cm) 108
South Branch Raritan River near High Bridge (d) 110
South Branch Raritan River at Arch Street, at High Bridge (cm) 111
Spruce Run at Glen Gardner (d) 113
Spruce Run near Glen Gardner (cm) 114
Mulhockaway Creek at Van Syckel (dcm) 116
Spruce Run at Clinton (dcm) 119
South Branch Raritan River at Stanton (d) 122
Bushkill Brook at Rockefellows Mills (cm) 123
South Branch Raritan River at Three Bridges (cm) 125
Neshanic River at Reaville (dcm) 126
Back Brook:
Back Brook tributary near Ringoes (d) 129
South Branch Raritan River at South Branch (cm) 130
Holland Brook at Readington (d) 131
North Branch Raritan River near Chester (cm) 132
North Branch Raritan River near Far Hills (d) 134
North Branch Raritan River at Burnt Mills (cm) 135
Lamington (Black) River at Succasunna (d) 137
Lamington (Black) River near Ironia (dcm) 138
Lamington (Black) River near Pottersville (dcm) 141
Upper Cold Brook near Pottersville (d) 143
Lamington (Black) River tributary No. 2 near Pottersville (d) 144
Rockaway Creek:
South Branch Rockaway Creek at Whitehouse (d) 145
Rockaway Creek at Whitehouse (dcm) 146
Lamington (Black) River at Burnt Mills (cm) 149

Page

RARITAN RIVER BASIN--Continued

- North Branch Raritan River near Raritan (d) 151
- Raritan River at Raritan (cm) 152
  - Peters Brook near Raritan (d) 154
    - Macs Brook at Somerville (d) 155
- Raritan River at Manville (dcm) 156
  - Millstone River near Manalapan (cm) 158
  - Millstone River at Grovers Mill (cm) 160
    - Stony Brook at Princeton (dcm) 161
  - Millstone River at Kingston (cm) 164
    - Beden Brook near Rocky Hill (cm) 165
      - Pike Run at Belle Mead (d) 167
  - Millstone River at Blackwells Mills (d) 168
  - Millstone River at Weston (cm) 169
    - Royce Brook:
      - Royce Brook tributary near Belle Mead (d) 170
- Raritan River below Calco Dam, at Bound Brook (d) 171
  - Middle Brook:
    - West Branch Middle Brook near Martinsville (d) 172
    - West Branch Middle Brook near Somerville (d) 173
- Raritan River at Queens Bridge at Bound Brook (cms) 174
  - Bound Brook:
    - Green Brook at Seeley Mills (d) 176
    - Green Brook at Plainfield (d) 177
      - Stony Brook:
        - East Branch Stony Brook at Best Lake at Watchung (d) 178
      - Stony Brook at Watchung (d) 179
  - Lawrence Brook at Davidsons Mill Road, near Patricks Corner (cm) 180
  - Lawrence Brook at Farrington Dam (d) 182
  - South River:
    - Matchaponix Brook at Mundy Avenue, at Spotswood (cm) 183
      - Manalapan Brook at Federal Road near Manalapan (cm) 185
      - Manalapan Brook at Spotswood (d) 187
      - Manalapan Brook at Bridge Street at Spotswood (cm) 188
  - South River at Old Bridge (d) 190
  - South River below Duhernal Dam at Old Bridge (cm) 191
- Reservoirs in Raritan River basin (e) 192
  - Diversions in Raritan River basin 193

NAVESINK RIVER BASIN

- Swimming River:
  - Hop Brook:
    - Willow Brook near Holmdel (cm) 194
  - Yellow Brook at Colts Neck (cm) 195
- Swimming River (head of Navesink River) near Red Bank (d) 196

SHARK RIVER BASIN

- Shark River near Neptune City (dcm) 197
  - Jumping Brook near Neptune City (cm) 200

MANASQUAN RIVER BASIN

- Manasquan River near Georgia (cm) 202
  - Marsh Bog Brook at Squankum (cm) 203
- Manasquan River at Squankum (d) 205

METEDECONK RIVER BASIN

- North Branch Metedeconk River near Lakewood (d) 206

TOMS RIVER BASIN

- Toms River near Toms River (dcms) 207

OYSTER CREEK BASIN

- Oyster Creek near Brookville (d) 210

WESTECUNK CREEK BASIN

- Westecunk Creek at Stafford Forge (d) 211

MULLICA RIVER BASIN

- Mullica River at outlet of Atsion Lake, at Atsion (cm) 212
- Mullica River near Batsto (d) 214
- Mullica River at Pleasant Mills (cm) 215
  - Hammonton Creek at Wescoatville (cm) 217
  - Batsto River at Batsto (dcm) 219
  - Batsto River at Pleasant Mills (e) 222
  - West Branch Wading River near Jenkins (d) 223
  - West Branch Wading River at Maxwell (cms) 224
    - Oswego River at Harrisville (dcm) 226
  - Bass River:
    - East Branch Bass River near New Gretna (dcm) 229

ABSECON CREEK BASIN

- Absecon Creek at Absecon (d) 231

GREAT EGG HARBOR RIVER BASIN

- Great Egg Harbor River near Sicklerville (cm) 232
- Great Egg Harbor River near Blue Anchor (cm) 234
- Great Egg Harbor River at Folsom (d) 235
- Great Egg Harbor River at Weymouth (cm) 236

TUCKAHOE RIVER BASIN

- Tuckahoe River at Head of River (d) 238

GROUND WATER STATIONS, BY COUNTY, FOR WHICH RECORDS ARE PUBLISHED

Page

GROUND-WATER LEVEL RECORDS

ATLANTIC COUNTY
- Longport 257
- Jobs Point 258
- Galen Hall 259
- Atlantic City WD 600 260
- Oceanville 1 261
- Scholler 1 262

BURLINGTON COUNTY
- Mount 263
- Oswego Lake 2 264
- Penn State Forest Shallow 265
- Butler Place 1 266
- Butler Place 2 267

CAMDEN COUNTY
- New Brooklyn Park 1 268
- New Brooklyn Park 2 269
- New Brooklyn Park 3 270
- Winslow WC 5 271

CUMBERLAND
- Ragovin 2100 272

ESSEX
- Canoe Brook 30 273
- Ballantine 8 274

MERCER
- Honey Branch 10 275

MIDDLESEX
- Forsgate 4 276
- Forsgate 3 277
- Forsgate 1 278
- Hulsart 279
- Browntown 280
- Fischer 281
- South River 2 282
- American Cyanamid 1 283

MONMOUTH
- Allaire State Park C 284
- Manalapan 1 285
- Village 215 286
- Marlboro 1 287
- Sandy Hook SP 1 288
- Keyport Borough WD 4 289

MORRIS
- Briarwood School 290
- Mount Freedom 2 291
- Green Acres 292
- Troy Meadows 1 293
- Green Pond TW 5 294

OCEAN
- Island Beach 3 295
- Island Beach 1 296
- Crammer 297
- Toms River TW 2 298
- Toms River Chem. 84 299
- Colliers Mills TW 1 300
- Colliers Mills TW 3 301
- Colliers Mills TW 2 302
- Colliers Mills TW 4 303

UNION
- Hatfield 2 304
- White Lab 3 305
- Schweitzer 306

QUALITY OF GROUND-WATER RECORDS
- Atlantic County 307
- Burlington County 308
- Camden County 309
- Middlesex County 310
- Monmouth County 312
- Morris County 313
- Ocean County 314

INTRODUCTION

Water resources data for the 1983 water year for New Jersey consist of records of stage, discharge, and water quality of streams; stage, contents, and water quality of lakes and reservoirs; and water levels and water quality of ground water. This volume contains water discharge at 80 gaging stations; tide summaries for 1 station; stage and contents for 15 lakes and reservoirs; water quality for 68 surface water sites and 82 wells; and water levels for 50 observation wells. Also included are data for 41 crest-stage partial-record stations, 17 tidal crest-stage gages and 47 low-flow partial-record stations. Locations of these sites are shown in figures 5, 6, and 7. Additional water data were collected at various sites not part of the systematic data collection program and are published as miscellaneous measurements and analyses. These data together with the data in Volume 2 represent that part of the National Water Data System operated by the U.S. Geological Survey and cooperating State, local, and Federal agencies in New Jersey.

Records of discharge or stage of streams, and contents or stage of lakes and reservoirs were first published in a series of U.S. Geological Survey water-supply papers entitled, "Surface Water Supply of the United States." Through September 30, 1960, these water-supply papers were in an annual series and then in a 5-year series for 1961-65 and 1966-70. Records of chemical quality, water temperatures, and suspended sediment were published from 1941 to 1970 in an annual series of water-supply papers entitled, "Quality of Surface Waters of the United States." Records of ground-water levels were published from 1935 to 1974 in a series of water-supply papers entitled "Ground-Water Levels in the United States." Water-supply papers may be consulted in the libraries of the principal cities in the United States or may be purchased from Branch of Distribution, U.S. Geological Survey, 604 South Pickett Street, Alexandria, Virginia 22304.

For water years 1961 through 1970, streamflow data were released by the Geological Survey in annual reports on a State-boundary basis. Water-quality records for water years 1964 through 1970 were similarly released either in separate reports or in conjunction with streamflow records.

Beginning with the 1971 water year, water data for streamflow, water quality, and ground water are published in offical Survey reports on a State-boundary basis. These offical Survey reports carry an identification number consisting of the two letter State abbreviation, the last two digits of the water year, and the volume number. For example, this volume of the report is identified as "U.S. Geological Survey Water-Data Report NJ-83-1." These water-data reports are for sale, in paper copy or in microfiche, by the National Technical Information Service, U.S. Department of Commerce, Springfield, VA 22161.

Additional information, including current prices, for ordering specific reports may be obtained from the District Chief at the address given on the back of the title page or by telephone (609) 989-2162.

COOPERATION

This report was prepared by the U.S. Geological Survey under cooperative agreement with the following organizations:

New Jersey Department of Environmental Protection, Robert E. Hughey, Commissioner.
  Division of Water Resources, John W. Gaston, Jr., Director.
North Jersey District Water Supply Commission, Dean C. Noll, Chief Engineer.
Passaic Valley Water Commission, W.I. Inhoffer, General Superintendent and Chief Engineer.
County of Bergen, E.R. Ranuska, Director of Public Works and County Engineer.
County of Camden, Joseph T. Patermo, Director of Camden County Planning Board.
County of Morris, James Plante, Chairman of Morris County Municipal Utilities Authority.
County of Somerset, Thomas E. Decker, County Engineer, and Thomas Harris, Administrative Engineer.
Township of West Windsor, Larry Ellery, Chairman of Environmental Commission.
Township of Bridgewater, Cynthia Jacobson, Chairman of Environmental Commission.

Assistance in the form of funds was given by the Corps of Engineers, U.S. Army, in collecting records for 50 surface water stations, and for the collection of sediment records at one stream-sampling station, and by the U.S. Environmental Protection Agency for the collection of chemical analyses at four stream-sampling stations. In addition, several stations were operated fully or partially from funds appropriated directly to the Geological Survey. Assistance was also furnished by the National Weather Service and the National Ocean Survey.

The following organizations aided in collecting records:

Municipalities of Atlantic City, Jersey City, Newark, New Brunswick and Spotswood; American Cyanamid Co.; Commonwealth Water Co.; Elizabethtown Water Co.; Ewing-Lawrence Sewerage Authority; Hackensack Water Co.; Johns-Manville Products Corp.; and Monmouth Consolidated Water Co.; Jersey Central Power and Light Co.

Organizations that supplied data are acknowledged in station descriptions.

ACKNOWLEDGMENTS

The water resources data for New Jersey were processed and prepared for publication under the supervision of W.R. Bauersfeld, Chief, Hydrologic Studies Section. The data were collected, computed and processed by other personnel as follows:

H. Bivens
J. B. Campbell
G. L. Centinaro
T. A. Chepiga
R. S. Cole
M. J. DeLuca
J. F. Dudek
B. D. Gillespie
C. E. Gurney
J. T. Fisher
A. J. Kalik
C. E. Kahn
G. J. Pheasant
M. O. Philips
E. Rodgers

SUMMARY OF HYDROLOGIC CONDITIONS

Streamflow in the 1983 Water Year was slightly above normal in the southern and coastal areas but was excessive in the north (upper 25 percent of record). Precipitation ranged from about 120 percent of normal in the coastal and southern part of the State to 150 percent of normal in the north. Reservoirs began spilling in March, but by the end of the water year, they were only 62 percent of capacity, compared to 88 percent at the end of the previous year.

Water year 1983 began with streamflow below normal at all index stations. River flow steadily declined until the end of February when runoff was deficient by 2.5 inches and streamflow only about 75 percent of normal. River flow recovered in March when precipitation fell on 20 days of the month. A major storm on March 18 and 19 resulted in from 2 to 4 inches of rainfall throughout the State and produced a monthly total more than 200 percent above normal. Heavy precipitation continued in April, with the total again exceeding 200 percent of normal. Flooding was reported in many northeastern communities. The Delaware River at Trenton recorded its highest stage since August, 1955, on April 17. A new high monthly mean discharge for April was noted at South Branch Raritan River at High Bridge that exceeded the previous record discharge set in 1952, and at Great Egg Harbor River at Folsom set in 1970. Excessive streamflow continued through July, even though precipitation returned to about normal in June. For the remainder of the year, streamflow was about normal in the north and about 80 percent of normal in the south and coastal areas.

Streamflow at the index station for northern New Jersey (South Branch Raritan River near High Bridge) averaged 165 ft^3/s, which was 136 percent of the 65-year average. Streamflow at the index station for southern New Jersey (Great Egg Harbor River at Folsom) averaged 92.3 ft^3/s, which was 107 percent of 58-year average. The observed annual mean discharge of the Delaware River at Trenton was 12,650 ft^3/s, which was 108 percent of normal. However, the Delaware is highly regulated by reservoirs and diversions. The natural flow at Trenton (adjusted for diversion and storage upstream) was 110 percent of normal for the year.

Figures 2 and 3 compare the monthly and annual discharges with past records at these index gaging stations.

Storage in the 13 major water-supply reservoirs in New Jersey decreased from 66.3 billion gallons (88 percent of capacity) on October 1, 1982, to 46.8 billion gallons (62 percent of capacity) on September 30, 1983. Storage in Wanaque Reservoir decreased from 24.4 billion gallons (87 percent of capacity) on October 1, 1982, to 18.9 billion gallons (67 percent of capacity) on September 30, 1983. Pumped storage in Round Valley Reservoir increased from 39.8 billion gallons (72 percent of capacity) on October 1, 1982, to 40.6 billion gallons (74 percent of capacity) on September 30, 1983.

Greater-than-normal precipitation during the last 7 months of the year contributed to general improvement in water quality as reflected by specific conductance. Mean monthly specific conductance for the Delaware River at Trenton during the later months was lower than or equal to values for the preceding year. Heavy rainfall during March resulted in the lowest recorded values of specific conductance on the Passaic River at Little Falls since continuous record began October 1, 1980.

Ground-water levels rose during 1983 in most water-table wells throughout the State, reflecting increases in recharge. Water-table levels in 1983 were generally higher than in either 1981 or 1982 and were in the normal range from about March through September. Artesian water levels in wells tapping the heavily stressed confined aquifers of the Coastal Plain, however, continued to show long-term net declines because of increasing withdrawals of ground water. As in past years, the declines were greatest in the Potomac-Raritan-Magothy aquifer system throughout the Coastal Plain and in the Wenonah-Mount Laurel, Englishtown, and Farrington aquifers in the northern part of the Coastal Plain.

Monthly water levels are compared with long-term averages at two observation wells in figure 4. The wells shown are the Bird well in Hunterdon County and the Crammer well in Ocean County. For further comparison, multi-year hydrographs are provided for all the wells given in these reports. The hydrographs are shown with the 1983 water-level data.

DEFINITION OF TERMS

Terms related to streamflow, water-quality and other hydrologic data, as used in this report, are defined below. See also the table for converting Inch-pound Units to Metric Units on the inside of the back cover.

Acre-foot (AC-FT, acre-ft) is the quantity of water required to cover 1 acre to a depth of 1 foot and is equivalent to 43,560 cubic feet or about 326,000 gallons or 1,233 cubic meters.

Adenosine triphosphate (ATP) is the primary energy donor in cellular life processes. Its central role in living cells makes it an excellent indicator of the presence of living material in water. A measure of ATP therefore provides a sensitive and rapid estimate of biomass. ATP is reported in micrograms per liter of the original water sample.

Algae are mostly aquatic single-celled, colonial, or multi-celled plants, containing chlorophyll and lacking roots, stems, and leaves.

Algal growth potential (AGP) is the maximum algal dry weight biomass that can be produced in a natural water sample under standardized laboratory conditions. The growth potential is the algal biomass present at stationary phase and is expressed as milligrams dry weight of algae produced per liter of sample.

Aquifer is a geologic formation, group of formations, or part of a formation that contains sufficient saturated permeable material to yield significant quantities of water to wells and springs.

Aquifer codes and geologic names:

The following list shows the aquifer codes and geologic names of the formations in which the sampled wells are finished. The aquifer codes also appear in the column "Geologic Unit" in the ground-water quality tables:

- 112SFDF , STRATIFIED DRIFT
- 112CPMY , CAPE MAY FORMATION, UNDIFFERENTIATED
- 112ESRNS , CAPE MAY FORMATION, ESTUARINE SAND FACIES
- 121CNSY , COHANSEY SAND
- 121CKKD , KIRKWOOD-COHANSEY AQUIFER SYSTEM
- 122KRKDU , RIO GRANDE WATER-BEARING ZONE OF THE KIRKWOOD FORMATION
- 122KRKDL , ATLANTIC CITY 800-FOOT SAND OF THE KIRKWOOD FORMATION
- 124PNPN , PINEY POINT AQUIFER
- 124MNSQ , MANASQUAN FORMATION
- 125VNCN , VINCENTOWN FORMATION
- 211MLRW , WENONAH-MOUNT LAUREL AQUIFER
- 211EGLS , ENGLISHTOWN AQUIFER
- 211MRPA , POTOMAC-RARITAN-MAGOTHY AQUIFER SYSTEM, UNDIFFERENTIATED
  - 211MRPAU , UPPER AQUIFER, POTOMAC-RARITAN-MAGOTHY AQUIFER SYSTEM, (BURLINGTON, CAMDEN, GLOUCESTER, SALEM COUNTIES)
  - 211MRPAM , MIDDLE AQUIFER, POTOMAC-RARITAN-MAGOTHY AQUIFER SYSTEM (BURLINGTON, CAMDEN, GLOUCESTER, SALEM COUNTIES)
  - 211MRPAL , LOWER AQUIFER, POTOMAC-RARITAN-MAGOTHY AQUIFER SYSTEM (BURLINGTON, CAMDEN, GLOUCESTER, SALEM COUNTIES)
  - 211ODBG , OLD BRIDGE AQUIFER, POTOMAC-RARITAN-MAGOTHY AQUIFER SYSTEM (MERCER, MIDDLESEX, MONMOUTH COUNTIES)
  - 211FRNG , FARRINGTON AQUIFER, POTOMAC-RARITAN-MAGOTHY AQUIFER SYSTEM (MERCER, MIDDLESEX, MONMOUTH COUNTIES)
- 231BRCK , BRUNSWICK SHALE OR FORMATION
- 231SCKN , STOCKTON FORMATION

Artesian means confined and is used to describe a well in which the water level stands above the top of the aquifer, tapped by the well. A flowing artesian well is one in which the water level is above land surface.

Bacteria are microscopic unicellular organisms, typically spherical, rod-like, or spiral and threadlike in shape, often clumped into colonies. Some bacteria cause disease, others perform an essential role in nature in the recycling of materials; for example, by decomposing organic matter into a form available for reuse by plants.

Total coliform bacteria are a particular group of bacteria that are used as indicators of possible sewage pollution. They are characterized as aerobic or facultative anaerobic, gram-negative, nonspore-forming, rod-shaped bacteria which ferment lactose with gas formation within 48 hours at 35°C. In the laboratory these bacteria are defined as all the organisms which produce colonies with a golden-green metallic sheen within 24 hours when incubated at 35°C ± 0.5°C on M-Endo medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 ml of sample.

Fecal coliform bacteria are bacteria that are present in the intestines or feces of warmblooded animals. They are often used as indicators of the sanitary quality of the water. In the laboratory they are defined as all organisms which produce blue colonies within 24 hours when incubated at 44.5°C ± 0.2°C on M-FC medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 ml of sample.

Fecal streptococcal bacteria are bacteria found also in the intestines of warm-blooded animals. Their presence in water is considered to verify fecal pollution. They are charac-terized as gram-positive, cocci bacteria which are capable of growth in brain-heart infusion broth. In the laboratory they are defined as all the organisms which produce red or pink colonies within 48 hours at 35°C ± 0.5°C on KF streptococcus medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 ml of sample.

Bedload is the sediment which moves along in essentially continuous contact with the streambed by rolling, sliding, and making brief excursions into the flow a few diameters above the bed.

Bed material is the unconsolidated material of which a streambed, lake, pond, reservoir, or estuary bottom is composed.

Biochemical oxygen demand (BOD) is a measure of the quantity of dissolved oxygen, in milligrams per liter, used for the decomposition of organic matter by microorganisms, such as bacteria.

Biomass is the amount of living matter present at any given time, expressed as the weight per unit area or volume of habitat.

Ash mass is the mass or amount of residue present after the residue from the dry mass determination has been ashed in a muffle furnace at a temperature of 500°C for 1 hour. The ash mass values of zooplankton and phytoplankton are expressed in grams per cubic meter (g/m^3) and periphyton and benthic organisms in grams per square meter (g/m^2).

Dry mass refers to the mass of residue present after drying in an oven at 60°C for zooplankton and 105°C for periphyton, until the mass remains unchanged. This mass represents the total organic matter, ash and sediment, in the sample. Dry mass values are expressed in the same units as ash mass.

Organic mass or volatile mass of the living substance is the difference between the dry mass and the ash mass, and represents the actual mass of the living matter. The organic mass is expressed in the same units as for ash mass and dry mass.

Wet mass is the mass of living matter plus contained water.

Bottom material: See Bed material.

Cells/volume refers to the number of cells of any organism which is counted by using a microscope and grid or counting cell. Many planktonic organisms are multicelled and are counted according to the number of contained cells per sample, usually milliliters (mL) or liters (L).

Cfs-day is the volume of water represented by flow of 1 cubic foot per second for 24 hours. It is equivalent to 86,400 cubic feet, approximately 1.9835 acre-feet, about 646,000 gallons or 2,447 cubic meters.

Chemical oxygen demand (COD) is a measure of the quantity of organic matter which can be chemically oxidized in the presence of a strong oxidant.

Chlorophyll refers to the green pigments of plants. Chlorophyll a and b are the two most common pigments in plants.

Color unit is produced by one milligram per liter of platinum in the form of the chloroplatinate ion. Color is expressed in units of the platinum-cobalt scale.

Contents is the volume of water in a reservoir or lake. Unless otherwise indicated, volume is computed on the basis of a level pool and does not include bank storage.

Continuing record station is a specified site which meets one or all conditions listed:

1. When chemical samples are collected daily or monthly for 10 or more months during the water year.
2. When water temperature records include observations taken one or more times daily.
3. When sediment discharge records include periods for which sediment loads are computed and are considered to be representative of the runoff for the water year.

Control designates a feature downstream from the gage that determines the stage-discharge relation at the gage. This feature may be a natural constriction of the channel, an artificial structure, or a uniform cross section over a long reach of the channel.

Control structure as used in this report is a structure on a stream or canal that is used to regulate the flow or stage of the stream or to prevent the intrusion of salt water.

Cubic feet per second per square mile (CFSM) is the average number of cubic feet of water flowing per second from each square mile of area drained, assuming that the runoff is distributed uniformly in time and area.

Cubic foot per second (ft^3/s, cfs) is the rate of discharge representing a volume of 1 cubic foot passing a given point during 1 second and is equivalent to 7.48 gallons per second or 448.8 gallons per minute or 0.02832 cubic meters per second.

Discharge is the volume of water (or more broadly, volume of fluid plus suspended sediment), that passes a given point within a given period of time.

Instantaneous discharge is the discharge at a particular instant of time.

Mean discharge (MEAN) is the arithmetic mean of individual daily mean discharges during a specific period.

Dissolved refers to that material in a representative water sample which passes through a 0.45 µm membrane filter. This is a convenient operational definition used by Federal agencies that collect water data. Determinations of "dissolved" constituents are made on subsamples of the filtrate.

Diversity index is a numerical expression of the evenness of distribution of aquatic organisms. The formula for diversity index is:

$$\bar{d} = -\sum_{i=1}^{s} \frac{n_i}{n} \log_2 \frac{n_i}{n}$$

Where n_i is the number of individuals per taxon, n is the total number of individuals, and s is the total number of taxa in the sample of the community. Diversity index values range from zero, when all the organisms in the sample are the same, to some positive number, when some or all of the organisms in the sample are different.

Drainage area of a stream at a specified location is that area, measured in a horizontal plane, enclosed by a topographic divide from which direct surface runoff from precipitation normally drains by gravity into the stream above the specified point. Figures of drainage area given herein include all closed basins, or noncontributing areas, within the area unless otherwise noted.

Drainage basin is a part of the surface of the earth that is occupied by a drainage system, which consists of a surface stream or body of impounded surface water together with all tributary surface stream and bodies of impounded surface water.

Gage height (G.H.) is the water-surface elevation referred to some arbitrary gage datum. Gage height is often used interchangeably with the more general term "stage," although gage height is more appropriate when used with a reading on a gage.

Gaging station is a particular site on a stream, canal, lake, or reservoir where systematic observations of gage height or discharge are obtained. When used in connection with a discharge record, the term is applied only to those gaging stations where a continuous record of discharge is obtained.

Hardness of water is a physical-chemical characteristic that is commonly recognized by the increased quantity of soap required to produce lather. It is attributable to the presence of alkaline earths (principally calcium and magnesium) and is expressed as equivalent calcium carbonate ($CaCO_3$).

High tide is the maximum height reached by each rising tide.

Hydrologic unit is a geographic area representing part or all of a surface drainage basin or distinct hydrologic feature as delineated by the Office of Water Data Coordination on the State Hydrologic Unit Maps; each hydrologic unit is identified by an 8-digit number.

Land-surface datum is a datum plane that is approximately at the land surface at the well.

Low tide is the minimum height reached by each falling tide.

Mean high or low tide is the average of all high or low tides, respectively, over a specified period.

Metamorphic stage refers to the stage of development that an organism exhibits during its transformation from an immature form to an adult form. This developmental process exists for most insects, and the degree of difference from the immature stage to the adult form varies from relatively slight to pronounced, with many intermediates. Examples of metamorphic stages of insects are egg-larva-adult or egg-nymph-adult.

Methylene blue active substance (MBAS) is a measure of apparent detergents. This determination depends on the formation of a blue color when methylene blue dye reacts with synthetic detergent compounds.

Micrograms per gram (UG/G) is a unit expressing the concentration of a chemical element as the weight (micrograms) of the element sorbed per unit weight (gram) of sediment.

Micrograms per liter (UG/L, µg/L) is a unit expressing the concentration of chemical constituents in solution as weight (micrograms) of solute per unit volume (liter) of water. One thousand micrograms per liter is equivalent to one milligram per liter.

Milligrams per liter (MG/L, mg/L) is a unit for expressing the concentration of chemical constituents in solution. Milligrams per liter represents the weight of solute per unit volume of water. Milligrams or micrograms per liter may be converted to milliequivalents (one thousandth of a gram-equivalent weight of a constituent) per liter by multiplying by the factors in Hem (1970).

National Geodetic Vertical Datum of 1929 (NGVD of 1929). A geodetic datum derived from a general adjustment of the first order level nets of both the United States and Canada, formerly called "Mean Sea Level."

NJ-WRD well number is a hyphenated, 6-digit identification number which the U.S. Geological Survey assigned to all New Jersey wells in the Ground Water Site Inventory (GWSI) data base. This numbering system was developed in 1978 to simplify identification of wells. The first two digits are a code for the county in which the well is located, and the last four digits are a sequence number. Each well added to GWSI is assigned the next higher sequence number for the county in which the well is located. These NJ-WRD well numbers are being used now in the ground-water level descriptions, wells sampled for water-quality analyses, and on the corresponding location maps in these reports.

Organism is any living entity, such as an insect, phytoplankter, or zooplankter.

Organism count/area refers to the number of organisms collected and enumerated in a sample and adjusted to the number per area habitat, usually square meters (m^2), acres, or hectares. Periphyton, benthic organisms, and macrophytes are expressed in these terms.

Organism count/volume refers to the number of organisms collected and enumerated in a sample and adjusted to the number per sample volume, usually milliters (mL) or liters (L). Numbers of planktonic organisms can be expressed in these terms.

Total organism count is the total number of organisms collected and enumerated in any particular sample.

Partial-record station is a particular site where limited streamflow data are collected systematically over a period of years for use in hydrologic analyses.

Particle size is the diameter, in millimeters (mm), of suspended sediment or bed material determined either by sieve or sedimentation methods. Sedimentation methods (pipet, bottom-withdrawal tube, visual-accumulation tube) determine fall diameter of particles in either distilled water (chemically dispersed) or in active water (the river water at the time and point of sampling).

Particle-size classification used in this report agrees with recommendations made by the American Geophysical Union Subcommittee on Sediment Terminology. The classification is as follows:

Classification	Size (mm)	Method of analysis
Clay..........	0.00024 - 0.004	Sedimentation.
Silt..........	.004 - .062	Sedimentation.
Sand..........	.062 - 2.0	Sedimentation or sieve.
Gravel........	2.0 - 64.0	Sieve.

The particle-size distributions given in this report are not necessarily representative of all particles in transport in the stream. Most of the organic material is removed and the sample is subjected to mechanical and chemical dispersion before analysis in distilled water. Chemical dispersion is not used for native-water analysis.

Percent composition is a unit for expressing the ratio of a particular part of a sample or population to the total sample or population, in terms of types, numbers, mass or volume.

Periphyton is the assemblage of microorganisms attached to and growing upon solid surfaces. While primarily consisting of algae, they also include bacteria, fungi, protozoa, rotifers, and other small organisms. Periphyton is a useful indicator of water quality.

Pesticides are chemical compounds used to control the growth of undesirable plants and animals. Major categories of pesticides include insecticides, miticides, fungicides, herbicides, and rodenticides.

Picocurie (PCI, pCi) is one trillionth (1×10^{-12}) of the amount of radioactivity represented by a curie (Ci). A curie is the amount of radioactivity that yields 3.7×10^{10} radioactive disintegrations per second. A picocurie yields 2.22 dpm (disintegrations per minute).

Plankton is the community of suspended, floating, or weakly swimming organisms that live in the open water of lakes and rivers.

Phytoplankton is the plant part of the plankton. They are usually microscopic and their movement is subject to the water currents. Phytoplankton growth is dependent upon solar radiation and nutrient substances. Because they are able to incorporate as well as release materials to the surrounding water, the phytoplankton have a profound effect upon the quality of the water. They are the primary food producers in the aquatic environment, and are commonly known as algae.

Blue-green algae are a group of phytoplankton organisms having a blue pigment, in addition to the green pigment called chlorophyll. Blue-green algae often cause nuisance conditions in water.

Diatoms are the unicellular or colonial algae having a siliceous shell. Their concentrations are expressed as number of cells per milliliter of sample.

Green algae have chlorophyll pigments similar in color to those of higher green plants. Some forms produce algal mats or floating "moss" in lakes. Their concentrations are expressed as number of cells per milliliter of sample.

Zooplankton is the animal part of the plankton. Zooplankton are capable of extensive movements within the water column, and are often large enough to be seen with the unaided eye. Zooplankton are secondary consumers feeding upon bacteria, phytoplankton, and detritus. Because they are the grazers in the aquatic environment, the zooplankton are a vital part of the aquatic food web. The zooplankton community is dominated by small crustaceans and rotifers.

Polychlorinated biphenyls (PCBs) are industrial chemicals that are mixtures of chlorinated biphenyl compounds having various percentages of chlorine. They are similar in structure to organochlorine insecticides.

Primary productivity is a measure of the rate at which new organic matter is formed and accumulated through photosynthetic and chemosynthetic activity of producer organisms (chiefly green plants). The rate of primary production is estimated by measuring the amount of oxygen released (oxygen method) or the amount of carbon assimilated by the plants (carbon method).

Milligrams of carbon per area or volume per unit time [mg $C/(m^2/time)$ for periphyton and macrophytes and mg $C/(m^3/time)$ for phytoplankton] are units for expressing primary productivity. They define the amount of carbon dioxide consumed as measured by radioactive carbon (carbon 14). The carbon 14 method is of greater sensitivity that the oxygen light and dark bottle method, and is preferred for use in unenriched waters. Unit time may be either the hour or day, depending on the incubation period.

Milligrams of oxygen per area or volume per unit time [mg $O_2/(m^2/time)$ for periphyton and macrophytes and mg $O_2/(m^3/time)$ for phytoplankton] are the units for expressing primary productivity. They define production and respiration rates as estimated from changes in the measured dissolved oxygen concentration. The oxygen light and dark bottle method is preferred if the rate of primary production is sufficient for accurate measurements to be made within 24 hours. Unit time may be either the hour or day, depending on the incubation period.

Radioisotopes are isotope forms of an element that exhibit radioactivity. Isotopes are varieties of a chemical element that differ in atomic weight, but are very nearly alike in chemical properties. The difference arises because the atoms of the isotopic forms of an element differ in the number of neutrons in the nucleus. For example: ordinary chlorine is a mixture of isotopes having atomic weights 35 and 37, with the natural mixture having an atomic weight of 35.453.

Radioisotopes that are determined in this report are natural uranium in μg/L (micrograms per liter), radium as radium-226 in PCI/L, (pCi/L, picocuries per liter), gross beta in PCI/L, and gross alpha radiation as micrograms of uranium equivalent per liter (μg/L). Gross alpha and beta radioactivity associated with the fine grained (silt and clay sized) sediments in the samples are also determined.

Recoverable from bottom material is the amount of a given constituent that is in solution after a representative sample of bottom material has been digested by a method (usually using an acid or mixture of acids) that results in dissolution of only readily soluble substances. Complete dissolution of all bottom material is not achieved by the digestion treatment and thus the determination represents less than the total amount (that is, less than 95 percent) of the constituent in the sample. To achieve comparability of analytical data, equivalent digestion procedures would be required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

River mile as used herein, is the distance above the mouth of Delaware Bay, measured along the center line of the navigation channel or the main stem of the Delaware River. River mile data were furnished by the Delaware River Basin Commission.

Runoff in inches (IN, in) shows the depth to which the drainage area would be covered if all the runoff for a given time period were uniformly distributed on it.

Screened interval (FT) is the length of well screen through which water enters a well, in feet below land surface.

Sediment is solid material that originates mostly from disintegrated rocks and is transported by, suspended in, or deposited from water; it includes chemical and biochemical precipitates and decomposed organic material such as humus. The quantity, characteristics, and cause of the occurrence of sediment in streams are influenced by environmental factors. Some major factors are degree of slope, length of slope, soil characteristics, land usage, and quantity and intensity of precipitation.

> *Mean concentration* is the time-weighted concentration of suspended sediment passing a stream section during a 24-hour day.
>
> *Suspended sediment* is the sediment that at any given time is maintained in suspension by the upward components of turbulent currents or that exists in suspension as a colloid.
>
> *Suspended-sediment concentration* is the velocity-weighted concentration of suspended sediment in the sampled zone (from the water surface to a point approximately 0.3 ft above the bed) expressed as milligrams of dry sediment per liter of water-sediment mixture (mg/L).
>
> *Suspended-sediment discharge* (tons) is the rate at which dry weight of sediment passes a section of a stream or is the quantity of sediment, as measured by dry weight, or by volume, that is discharged in a given time. It is computed by multiplying discharge times mg/L times 0.0027.
>
> *Suspended-sediment load* is quantity of suspended sediment passing a section in a specified period.
>
> *Total sediment discharge* (tons/day) is the sum of the suspended-sediment discharge and the bed-load discharge. It is the total quantity of sediment, as measured by dry weight or volume, that passes a section during a given time.

Solute is any substance derived from the atmosphere, vegetation, soil, or rocks that is dissolved in water.

Specific conductance is a measure of the ability of a water to conduct an electrical current and is expressed in micromhos per centimeter at 25°C. Because the specific conductance is related to the number and specific chemical types of ions in solution, it can be used for approximating the dissolved-solids content of the water. Commonly, the amount of dissolved solids (in milligrams per liter) is about 65 percent of the specific conductance (in micromhos per cm at 25°C). This relation is not constant from stream to stream or from well to well, and it may even vary in the same source with changes in the composition of the water.

Stage-discharge relation is the relation between gage height and the amount of water flowing in a channel, expressed as volume per unit of time.

Streamflow is the discharge that occurs in a natural channel. Although the term "discharge" can be applied to the flow of a canal, the word "streamflow" uniquely describes the discharge in a surface stream course. The term "streamflow" is more general than "runoff." Streamflow may be applied to discharge whether or not it is affected by diversion or regulation.

Substrate is the physcial surface upon which an organism lived.

> *Artificial substrate* is a device which is purposely placed in a stream or lake for colonization by organisms. The artificial substrate simplifies the community structure by standardizing the substrate from which each sample is taken. Examples of artificial substrates are basket samplers (made of wire cages filled with clean streamside rocks) and multi-plate samplers (made of hardboard) for benthic organism collection, and plexiglass strips for periphyton collection.
>
> *Natural substrate* refers to any naturally occurring emersed or submersed solid surface, such as a rock or tree, upon which an organism lived.

Surface area of a lake is that area outlined on the latest U.S.G.S. topographic map as the boundary of the lake and measured by a planimeter in acres. In localities not covered by topographic maps, the areas are computed from the best maps available at the time planimetered. All areas shown are those for the stage when the planimetered map was made.

Surficial bed material is that part (0.1 to 0.2 ft) of the bed material that is sampled using U.S. Series Bed-Material Samplers.

Suspended, recoverable is the amount of a given constituent that is in solution after the part of a representative water-suspended sediment sample that is retained on a 0.45 μm membrane filter has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all the particulate matter is not achieved by the digestion treatment and thus the determination represents something less than the "total" amount (that is, less than 95 percent) of the constituent present in the sample. To achieve comparability of analytical data, equivalent digestion procedures would be required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

Determinations of "suspended, recoverable" constituents are made either by analyzing portions of the material collected on the filter or, more commonly, by difference, based on determinations of (1) *dissolved* and (2) *total recoverable* concentrations of the constituent.

Suspended, total is the total amount of a given constituent in the part of a representative water-suspended sediment sample that is retained on a 0.45 µm membrane filter. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent determined. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to determine when the results should be reported as "suspended, total."

Determinations of "suspended, total" constituents are made either by analyzing portions of the material collected on the filter or, more commonly, by difference, based on determinations of (1) dissolved and (2) total concentrations of the constituent.

Taxonomy is the division of biology concerned with the classification and naming of organisms. The classification of organisms is based upon a hierarchical scheme beginning with Kingdom and ending with Species at the base. The higher the classification level, the fewer features the organisms have in common. For example, the taxonomy of a particular mayfly, Hexagenia limbata is the following:

Kingdom	Animal
Phylum	Arthropoda
Class	Insecta
Order	Ephemeroptera
Family	Ephemeridae
Genus	Hexageria
Species	Hexagenia limbata

Thermograph is a thermometer that continuously and automatically records, on a chart, the water temperatures of a stream. "Temperature recorder" is the term used to indicate the location of the thermograph or a digital mechanism that automatically records water temperature on paper tape.

Time-weighted average is computed by multiplying the number of days in the sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the total number of days. A time-weighted average represents the composition of water that would be contained in a vessel or reservoir that had received equal quantities of water from the stream each day for the year.

Tons per acre-foot indicates the dry mass of dissolved solids in 1 acre-foot of water. It is computed by multiplying the concentration in milligrams per liter by 0.00136.

Tons per day is the quantity of a substance in solution or suspension that passes a stream section during a 24-hour day.

Total is the total amount of a given constituent in a representative water-suspended sediment sample, regardless of the constituent's physical or chemical form. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent present in both the dissolved and suspended phases of the sample. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to judge when the results should be reported as "total" (Note that the word "total" does double duty here, indicating both that the sample consists of a water-suspended sediment mixture and that the analytical method determines all of the constituent in the sample).

Total in bottom material is the total amount of a given constituent in a representative sample of bottom material. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent determined. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to judge when the results should be reported as "total in bottom material."

Total load (tons) is the total quantity of any individual constituent, as measured by dry mass or volume, that is being transported in a specific amount of water (discharge) during a given time. It is computed by multiplying the total discharge, times the mg/L of the constituent, times the factor 0.0027, times the number of days.

Total, recoverable is the amount of a given constituent that is in solution after a representative water-suspended sediment sample has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all particulate matter is not achieved by the digestion treatment, and thus the determination represents something less than the "total" amount (that is, less than 95 percent) of the constituent present in the dissolved and suspended phases of the sample. To achieve comparability of analytical data, equivalent digestion procedures would be required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

WDR is used as an abbreviation for "Water-Data Report" in the summary REVISIONS paragraph to refer to previously published State annual basic-data reports. Prior to 1975, WRD was used, which was the abbreviation for "Water-Resources Data."

Weighted average is used in this report to indicate discharge-weighted average. It is computed by multiplying the discharge for a sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the sum of the discharges. A discharge-weighted average approximates the composition of water that would be found in a reservoir containing all the water passing a given location during the water year after thorough mixing in the reservoir.

WSP is used as an abbreviation for "Water-Supply Paper" in reference to previously published reports.

DOWNSTREAM ORDER AND STATION NUMBER

Since October 1, 1950, the order of listing hydrologic-station records in Survey reports is in a downstream direction along the main stream. All stations on a tributary entering upstream from a main-stream station are listed before that station. A station on a tributary that enters between two main-stream stations is listed between them. A similar order is followed in listing stations on first rank, second rank, and other ranks of tributaries. The rank of any tributary on which a station is situated with respect to the stream to which it is immediately tributary is indicated by an indention in a list of stations in front of the report. Each indention represents one rank. This downstream order and system of indention show which stations are on tributaries between any two stations and the rank of the tributary on which each station is situated.

As an added means of identification, each hydrologic station and partial-record station has been assigned a station number. These are in the same downstream order used in this report. In assigning station numbers, no distinction is made between partial-record stations and other stations; therefore, the station number for a partial-record station indicates downstream-order position in a list made up of both types of stations. Gaps are left in the series of numbers to allow for new stations that may be established; hence, the numbers are not consecutive. The complete 8-digit number for each station such as 01463500, which appears just to the left of the station name, includes the 2-digit part number "01" plus the 6-digit downstream order number "463500."

NUMBERING SYSTEM FOR WELLS AND MISCELLANEOUS SITES

The 8-digit downstream order station numbers are not assigned to wells and miscellaneous sites where only random water-quality samples or discharge measurements are taken.

The wells and miscellaneous site numbering system of the U.S. Geological Survey is based on the grid system of latitude and longitude. The system provides the geographic location of the well or miscellaneous site and a unique number for each site. The number consists of 15 digits. The first 6 digits denote the degrees, minutes, and seconds of latitude, the next 7 digits denote degrees, minutes, and seconds of longitude, and the last 2 digits are a sequential number for wells within a 1-second grid. In the event that the latitude-longitude coordinates for a well and a miscellaneous site are the same, they are assigned sequential numbers "01", "02", etc. as one would for wells. See figure 1 below.

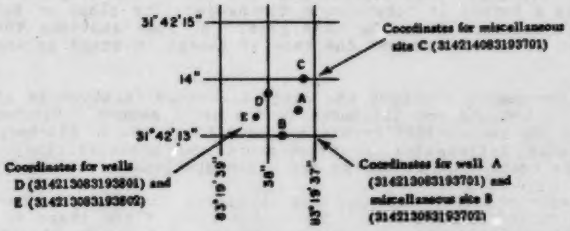

31°42'15"
Coordinates for miscellaneous site C (314214083193701)
C
14"
D
A
E
B
31°42'13"
Coordinates for wells D (314213083193801) and E (314213083193802)
083°19'38"
38"
083°19'37"
Coordinates for well A (314213083193701) and miscellaneous site B (314213083193702)

Figure 1. System for numbering wells and miscellaneous sites (latitude and longitude)

SPECIAL NETWORKS AND PROGRAMS

Some of the stations for which data are published in this report are included in special networks and programs. These stations are identified by their title, set in parentheses, under the station name.

Hydrologic bench-mark station is one that provides hydrologic data for a basin in which the hydrologic regimen will likely be governed solely by natural conditions. Data collected at a bench-mark station may be used to separate effects of natural from manmade changes in other basins which have been developed and in which the physiography, climate, and geology are similar to those in the undeveloped bench-mark basin.

National stream-quality accounting network (NASQAN) is a data collection network designed by the U.S. Geological Survey to meet many of the information demands of agencies or groups involved in national or regional water-quality planning and management. Both accounting and broad-scale monitoring objectives have been incorporated into the network design. Areal configuration of the network is based on river-basin accounting units (identified by 8-digit hydrologic-unit numbers) designated by the Office of Water Data Coordination in consultation with the Water Resources Council. Primary objectives of the network are (1) to depict areal variability of streamflow and water-quality conditions nationwide on a year-by-year basis and (2) to detect and assess long-term changes in streamflow and stream quality.

Pesticide program is a network of regularly sampled water-quality stations where samples are collected to determine the concentration and distribution of pesticides in stream where potential contamination could result from the application of the commonly used insecticides and herbicides. Operation of the network is a Federal interagency activity.

Radiochemical program is a network of regularly sampled water-quality stations where samples are collected to be analyzed for radioisotopes. The streams that are sampled represent major drainage basins in the conterminous United States.

EXPLANATION OF STAGE AND WATER-DISCHARGE RECORDS

Collection and computation of data

The base data collected at gaging stations consist of records of stage and measurements of discharge of streams or canals, and stage, surface area, and contents of lakes or reservoirs. In addition, observations of factors affecting the stage-discharge relation or the stage-capacity relation, weather records, and other information are used to supplement base data in determining the daily flow or volume of water in storage. Records of stage are obtained from either direct readings on a nonrecording gage or from a water-stage recorder that gives either a continuous graph of the fluctuations or a tape punched at selected time intervals. Measurements of discharge are made with a current meter, using the general methods adopted by the Geological Survey. These methods are decribed in standard text-books, in Water-Supply Paper 888, and in U.S. Geological Survey Techniques of Water Resources Investigations, book 3, chapter A6.

For stream-gaging stations, rating tables giving the discharge for any stage are prepared from stage-discharge relation curves. If extensions to the rating curves are necessary to express discharge greater than measured, they are made on the basis of indirect measurements of peak discharge (such as slope-area or contracted-opening measurements, computation of flow over dams or weirs), step-backwater techniques, velocity-area studies, and logarithmic plotting. The daily mean discharge is computed from gage heights and rating tables, then the monthly and yearly mean discharge are computed from the daily figures. If the stage-discharge relation is subject to change because of frequent or continual change in the physical features that form the control, the daily mean discharge is computed by the shifting-control method, in which correction factors based on individual discharge measurements and notes by engineers and observers are used in applying the gage heights to the rating tables. If the stage-discharge relation for a station is temporarily changed by the presence of aquatic growth or debris on the control, the daily mean discharge is computed by what is basically the shifting-control method.

At some stream-gaging stations the stage-discharge relation is affected by backwater from reservoirs, tributary streams, or other sources. This necessitates the use of the slope method in which the slope or fall in a reach of the stream is a factor in determining discharge. The slope or fall is obtained by means of an auxiliary gage set at some distance from the base gage. At some stations the stage-discharge relation is affected by changing stage; at these stations the rate of change in stage is used as a factor in determining discharge.

At some northern stream-gaging stations the stage-discharge relation is affected by ice in the winter, and it becomes impossible to compute the discharge in the usual manner. Discharge for periods of ice effect is computed on the basis of the gage-height record and occasional winter discharge measurements, consideration being given to the available information on temperature and precipitation, notes by gage observers and hydrologists, and comparable records of discharge for other stations in the same or nearby basins.

For a lake or reservoir station, capacity tables giving the contents for any stage are prepared from stage-area relation curves defined by surveys. The application of the stage to the capacity table gives the contents, from which the daily, montnly, or yearly change in contents is computed. Discharge over spillways is computed from a stage-discharge relation curve defined by discharge measurements.

If the stage-capacity curve is subject to changes because of deposition of sediment in the reservoir, periodic resurveys of the reservoir are necessary to define new stage-capacity curves. During the period between reservoir surveys the computed contents may be increasingly in error due to the gradual accumulation of sediment.

For some gaging stations there are periods when no gage-height record is obtained or the recorded gage height is so faulty that it cannot be used to compute daily discharge or contents. This happens when the recorder stops or otherwise fails to operate properly, intakes are plugged, the float is frozen in the well, or for various other reasons. For such periods the daily discharge are estimated on the basis of recorded range in stage, adjoining good record, discharge measurements, weather records, and comparison with other station records from the same or nearby basins. Likewise daily contents may be estimated on the basis of operator's log, prior and subsequent records, inflow-outflow studies, and other information.

The data in this report generally comprise a description of the station and tabulations of daily and monthly figures. For gaging stations on streams or canals a table showing the daily discharge and monthly and yearly discharge is given. For gaging stations on lakes and reservoirs a monthly summary table of stage and contents or a table showing the daily contents is given. Tables of daily mean gage height are included for some streamflow stations and for some reservoir stations. Records are published for the water year, which begins on October 1 and ends on September 30.

The description of the gaging station gives the location, drainage area, period of record, notations of revisions of previously published records, type and history of gages, general remarks, average discharge, and extremes of discharge or contents. The location for the gaging station and the drainage area are obtained from the most accurate maps available. River mileage, given under "LOCATION" for some stations, is that determined and used by the U.S. Army Corps of Engineers or other agencies. Periods for which there are published records for the present stations or for stations generally equivalent to the present one are given under "PERIOD OF RECORD."

Previously published streamflow records of some stations have been found to be in error on the basis of data or information later obtained. Revisions of such records are usually published along with the current records in one of the annual or compilation reports. In order to make it easier to find such revised records, a paragraph headed "REVISED RECORDS" has been added to the description of all stations for which revised records have been published. Listed therein are all the reports in which revisions have been published, each followed by the water years for which figures are revised in that report. In listing the water years only one number is given; for instance, 1965 stands for the water year October 1, 1964, to September 30, 1965. If no daily, monthly, or annual figures of discharge are affected by the revision, the fact is brought out by notations after the year dates as follows: "(M)" means that only the instantaneous maximum discharge was revised; "(m)" that only the instantaneous minimum was revised; and "(P)" that only peak discharges were revised. If the drainage area has been revised, the report in which the revised figure was first published is given. It should be noted that for all stations for which cubic feet per square mile and runoff in inches are published, a revision of the drainage area necessitates corresponding revision of all figures based on the drainage area. Revised figures of cubic feet per second per square mile and runoff in inches resulting from a revision of the drainage area only are usually not published in the annual series of reports.

The type of gage currently in use; the datum of the present gage referred to National Geodetic Vertical Datum; and a condensed history of the types, locations, and datums of previous gages used during the period of record are given under "GAGE." National Geodetic Vertical Datum is explained in "DEFINITION OF TERMS."

Information pertaining to the accuracy of the discharge records and to conditions which affect the natural flow of the gaging station is given under "REMARKS."

The average discharge for the number of years indicated is given under "AVERAGE DISCHARGE"; it is not given for stations having fewer than 5 complete years of record or for stations where changes in water development during the period of record cause the figure to have little significance. In addition, the median of yearly mean discharges is given for stream-gaging stations having 10 or more complete years of record if the median differs from the average by more than 10 percent. Under "EXTREMES" are given first the extremes for current year, second, the extremes for the period of record, and last information available outside the period of record. Unless otherwise qualified, the maximum discharge (or contents) is the instantaneous maximum corresponding to the crest-stage obtained by use of a water-stage recorder (graphic or digital), a crest-stage gage, or a nonrecording gage read at the time of the crest. If the maximum gage height did not occur on the same day as the maximum discharge (or contents), it is given separately. Similarly, the minimum is the instantaneous minimum unless otherwise qualified. For some stations peak discharges are listed with EXTREMES FOR THE CURRENT YEAR; if they are, all independent peaks, including the maximum for the year, above the selected base with the time of occurrence and corresponding gage heights are published in tabular format. The base discharge, which is given in the table heading, is selected so that an average of about three peaks a year will be presented. Peak discharges are not published for any canals, ditches, drains, or for any stream for which the peaks are subject to substantial control by man. Time of day is expressed in 24-hour local standard time; for example, 12:30 a.m. is 0030, 1:30 p.m. is 1330. The minimums for these stations are published in a separate paragraph following the table of peaks.

Skeleton rating tables are published, immediately following EXTREMES, for stream-gaging stations where they serve a useful purpose and the dates of applicability can be easily identified.

The daily table for stream-gaging stations gives the mean discharge for each day and is followed by monthly and yearly summaries. In the monthly summary below the daily table, the line headed "TOTAL" gives the sum of the daily figures. The lines headed "MAX" and "MIN" give the maximum and minimum daily discharges, respectively, for the month. Discharge for the month also may be expressed in cubic feet per second per square mile (line headed "CFSM"), or in inches (line headed "IN"). Figures for cubic feet per second per square mile and runoff in inches are omitted if there is extensive regulation or diversion, if the drainage area includes large noncontributing areas, or if the average annual rainfall over the drainage basin is usually less than 20 inches. In the yearly summary below the monthly summary, the figures shown are the appropriate daily discharges for the calendar and water years.

Footnotes to the table of daily discharge are introduced by word "NOTE." Footnotes are used to indicate periods for which the discharge is computed or estimated by special methods because of no gage-height record, backwater from various sources, or other unusual conditions. Periods of no gage-height record are indicated if the period is continuous for a month or more or includes the maximum discharge for the year. Periods of backwater from an unusual source, of indefinite stage-relation, or of any other unusual condition at the gage site are indicated only if they are a month or more in length and the accuracy of the records is affected. Days on which the stage-discharge relation is affected by ice are not indicated. The methods used in computing discharge for various unusual conditions have been explained in preceding paragraphs.

For most gaging stations on lakes and reservoirs the data presented comprise a description of the station and a monthly summary table of stage and contents. For some reservoirs a table showing daily contents or stage is given. A skeleton table of capacity at given stages is published for all reservoirs for which records are published on a daily basis, but is not published for reservoirs for which only monthly data are given.

Data collected at partial-record stations follow the information for continuous record sites. Data for partial-record discharge stations are presented in two tables. The first is a table of discharge measurements at low-flow partial-record stations, and the second is a table of annual maximum stage and discharge at crest-stage stations. The tables of partial-record stations are followed by a listing of discharge measurements made at sites other than continuous-record or partial-record stations. Occasionally, a series of discharge measurements are made within a short time period to investigate the seepage gains or losses along a reach of a stream or to determine the low-flow characteristics of an area. Such measurements are also given in special tables following the tables of partial-record stations.

Accuracy of field data and computed results

The accuracy of streamflow data depends primarily on (1) the stability of the stage-discharge relation or, if the control is unstable, the frequency of discharge measurements, and (2) the accuracy of observations of stage, measurements of discharge, and interpretation of records.

The station description under "REMARKS" states the degree of accuracy of the records. "Excellent" means that about 95 percent of the daily discharges are within 5 percent; "good" within 10 percent; and "fair" within 15 percent. "Poor" means that daily discharges have less than "fair" accuracy.

Figures of daily mean discharge in this report are shown to the nearest hundredth of a cubic foot per second for discharges of less than 1 cfs; to tenths between 1.0 and 10 cfs; to whole numbers between 10 and 1,000 cfs; and to 3 significant figures above 1,000 cfs. The number of significant figures used is based solely on the magnitude of the figure. The same rounding rules apply to discharge figures listed for partial-record stations and miscellaneous sites.

Discharge at many stations, as indicated by the monthly mean, may not reflect natural runoff due to the effects of diversion, consumption, regulation by storage, increase or decrease in evaporation due to artificial causes, or to other factors. For such stations, figures of cubic feet per second per square mile and of runoff in inches are not published unless satisfactory adjustments can be made for diversions, for changes in contents of reservoirs, or for other changes incident to use and control. Evaporation from a reservoir is not included in the adjustments for changes in reservoir contents, unless it is so stated. Even at those stations where adjustments are made, large errors in computed runoff may occur if adjustments or losses are large in comparison with the observed discharge.

Publications

Each volume of the 1960 series of U.S. Geological Survey water-supply papers entitled "Surface Water Supply of the United States" contains a listing of the numbers of all water-supply papers in which records of surface-water data were published for the area covered by the individual volumes. Each volume also contains a list of water-supply papers that give detailed information on major floods for the area. A new series of water-supply papers containing surface-water record for the 5-year period October 1, 1965 to September 30, 1970, also will include lists of annual and special reports published as water-supply papers.

Records through September 1950 for the area covered by this report have been compiled and published in Water-Supply Paper 1302; records for October 1950 to September 1960 have been compiled and published in Water-Supply Paper 1722; records for October 1960 to September 1965 have been compiled and published in Water-Supply Paper 1902; records for October 1965 to September 1970 have been compiled and published in Water-Supply Paper 2102. These reports contain summaries of monthly and annual discharge and month-end storage for all previously published records, as well as some records not contained in the annual series of water-supply papers. All records were reexamined and revised where warranted. Estimates of discharge were made to fill short gaps whenever practical. The yearly summary table for each gaging station lists the numbers of the water-supply papers in which daily records were published for that station.

Special reports on major floods or droughts or of other hydrologic studies for the area have been issued in publications other than water-supply papers. Information relative to these reports may be obtained from the district office.

Other data available

Information of a more detailed nature than that published for most of the gaging stations such as observations of water temperatures, discharge measurements, gage-height records, and rating tables is on file in the district office. Also most gaging-station records are available in computer-usable form and many statistical analyses have been made.

Information on the availability of unpublished data or statistical analyses may be obtained from the district office.

Records of stage or discharge collected by agencies other than the Geological Survey

Records of stage or discharge not published by the Geological Survey were collected in New Jersey at 30 sites during the water years October 1960 to current year by the following agencies: records at 4 sites were collected by the North Jersey District Water Supply Commission; at 14 sites by Passaic County; at 1 site by the National Weather Service; at 3 sites by the National Ocean Survey; at 3 sites by the Corps of Engineers; and 5 sites by Delaware River Joint Toll Bridge Commission. The National Water Data Exchange, Water Resources Division, U.S. Geological Survey, National Center, Reston, VA 22092, maintain an index of such sites. Information on records available at specific sites can be obtained upon request.

EXPLANATION OF WATER-QUALITY RECORDS

Collection and examination of data

Water samples for analyses are usually collected at or near gaging stations. Discharge records at these stations are used in the computation of some chemical constituent loads, as well as sediment loads.

The data in this report include a description of the sampling station and tabulations of the samples analyzed. The description of the sampling station gives the location, drainage area, periods of record for water-quality data, extremes of the pertinent data, and general remarks. For ground-water sampling stations, no descriptive statements are presented. However, the well number, date of sampling, and other pertinent data are given in the table containing the chemical analyses of ground water.

Water-quality information is presented for chemical and microbiological quality, water temperature, and fluvial sediment. Chemical quality includes the concentrations of individual constituents and certain properties such as hardness, specific conductance, and pH. Microbiological information includes quantitative identifications of certain bacteriological indicator organisms. Water-temperature data represent once-daily observations except for stations where a water-quality noncontinuous-digital monitor furnishes hourly temperature readings that provide daily maximum, minimum, and mean temperature data summaries. Fluvial-sediment information is given for suspended-sediment discharges and concentrations, and for particle-size distribution of suspended sediment.

Prior to the 1968 water year, data for chemical constituents and concentrations of suspended sediment were reported in parts per million (ppm) and water temperatures were reported in degrees Fahrenheit (°F). In October 1967, the U.S. Geological Survey began reporting data for chemical constituents and concentrations of suspended sediment in milligrams per liter (mg/L) and water temperatures in degrees Celsius (°C). In waters with a density of 1.000 g/ml (grams per milliliter), parts per million and milligrams per liter can be considered equal. In waters with a density greater than 1.000 g/ml, values in parts per million should be multiplied by the density to convert to milligrams per liter. Temperatures reported in degrees Celsius may be converted to degrees Fahrenheit by using table 1 below.

Table 1.--Degrees Celsius (°C) to degrees Fahrenheit (°F)* (Temperature reported to nearest 0.5°C)

°C	°F	°C	°F	°C	°F	°C	°F	°C	°F
0.0	32	10.0	50	20.0	68	30.0	86	40.0	104
0.5	33	10.5	51	20.5	69	30.5	87	40.5	105
1.0	34	11.0	52	21.0	70	31.0	88	41.0	106
1.5	35	11.5	53	21.5	71	31.5	89	41.5	107
2.0	36	12.0	54	22.0	72	32.0	90	42.0	108
2.5	36	12.5	54	22.5	72	32.5	90	42.5	108
3.0	37	13.0	55	23.0	73	33.0	91	43.0	109
3.5	38	13.5	56	23.5	74	33.5	92	43.5	110
4.0	39	14.0	57	24.0	75	34.0	93	44.0	111
4.5	40	14.5	58	24.5	76	34.5	94	44.5	112
5.0	41	15.0	59	25.0	77	35.0	95	45.0	113
5.5	42	15.5	60	25.5	78	35.5	96	45.5	114
6.0	43	16.0	61	26.0	79	36.0	97	46.0	115
6.5	44	16.5	62	26.5	80	36.5	98	46.5	116
7.0	45	17.0	63	27.0	81	37.0	99	47.0	117
7.5	45	17.5	63	27.5	81	37.5	99	47.5	117
8.0	46	18.0	64	28.0	82	38.0	100	48.0	118
8.5	47	18.5	65	28.5	83	38.5	101	48.5	119
9.0	48	19.0	66	29.0	84	39.0	102	49.0	120
9.5	49	19.5	67	29.5	85	39.5	103	49.5	121

*°C = 5/9 (°F - 32) or °F = 9/5 (°C) + 32.

In October 1968, the Geological Survey began reporting many of the chemical constituents as well as the minor elements in micrograms per liter instead of milligrams per liter. (See "Definitions of Terms," and table for converting Inch-pound Units to International System Units, inside back cover).

Most methods for collecting and analyzing water samples to determine the kinds and concentrations of solutes are described in the U.S. Geological Survey Techniques of Water-Resources Investigations listed at the end of this section. Analysis of pesticides, herbicides, and organic substances in water are described by Goerlitz and Brown. The collection and analysis of aquatic and microbio-logical samples are described by Greeson and others.

One sample can define adequately the water quality at a given time if the mixture of solutes throughout the stream cross section is homogeneous. However, the concentration of solutes at different locations in the cross section may vary widely with different rates of water discharge, depending on the source of material and the turbulence and mixing of the stream. Some streams must be sampled through many vertical sections to obtain a representative sample needed for an accurate mean concentration and for use in calculating load.

Chemical-quality data published in this report are considered to be the most representative values available for the stations listed. The values reported represent water-quality conditions at the time of sampling as much as possible, consistent with available sampling techniques and methods of analysis.

For chemical-quality stations equipped with noncontinuous-digital monitors, the records consist of daily maximum, minimum, and mean values for each constituent measured and are based upon hourly punches beginning at 0100 hours and ending at 2400 hours for the day of record. More detailed records (hourly values) may be obtained from the U.S. Geological Survey district office (for address see Page IV).

The quality of ground water normally does not change significantly during short periods of time; infrequent sampling and analysis of ground water adequately defines ground-water quality at a given site. Water samples from wells are collected after prepumping the well and are analyzed individually.

Water temperature

Water temperatures are measured at most of the water-quality stations. In addition, water temperatures are taken at time of discharge measurements for surface-water stations. For daily stations, the water temperatures are taken at about the same time each day. Large streams have a small diurnal temperature change; shallow streams may have a daily range of several degrees and may follow closely the changes in air temperature. Some streams may be affected by waste-heat discharges. Influential factors, field measurement, and data representation of temperature are described by Stevens, Ficke and Smoot (1975).

Sediment

Suspended-sediment concentrations are determined from samples collected by using depth-integrating samplers. Samples usually are obtained at several verticals in the cross-section, or a single sample may be obtained at a fixed point and a coefficient applied to determine the mean concentration in the cross section.

During periods of rapidly changing flow or rapidly changing concentration, samples may have been collected more frequently (twice daily or, in some instances, hourly). The published sediment discharges for days of rapidly changing flow or concentration were computed by the subdivided-day method (time-discharge weighted average). Therefore, for those days when the published sediment discharge value differs from the value computed as the product of discharge times mean concentration times 0.0027, the reader can assume that the sediment discharge for that day was computed by the subdivided-day method. For periods when no samples were collected, daily loads of suspended sediment were estimated on the basis of water discharge, sediment concentrations observed immediately before and after the periods, and suspended-sediment loads for other periods of similar discharge.

At other stations, suspended-sediment samples were collected periodically at many verticals in the stream cross section. Although data collected periodically may represent conditions only at the time of observations, such data are useful in establishing seasonal relations between quality and streamflow in predicting long-term sediment-discharge characteristics of the stream.

In addition to the records of the quantities of suspended sediment, records of the periodic measurements of the particle-size distribution of the suspended sediment are included.

Remark codes for water-quality data

PRINTED OUTPUT	REMARK	PRINTED OUTPUT	REMARK
E	ESTIMATED VALUE	<	ACTUAL VALUE IS KNOWN TO BE LESS THAN THE VALUE SHOWN
>	ACTUAL VALUE IS KNOWN TO BE GREATER THAN THE VALUE SHOWN	ND	MATERIAL SPECIFICALLY ANALYZED FOR BUT NOT DETECTED
K	RESULTS BASED ON COLONY COUNT OUTSIDE THE ACCEPTABLE RANGE (NON-IDEAL COLONY COUNT)		

Publications

Table 2 below, shows the annual series of water-supply papers that give information on quality of surface waters in New Jersey.

Table 2.--Water-supply paper (WSP) numbers, water years, 1945-70

Year	WSP	Year	WSP	Year	WSP
1945	1030	1954	1350	1963	1947
1946	1050	1955	1400	1964	1954
1947	1102	1956	1450	1965	1961
1948	1132	1957	1520	1966	1991
1949	1162	1958	1571	1967	2011
1950	1186	1959	1641	1968	2091
1951	1197	1960	1741	1969	2141
1952	1250	1961	1881	1970	2151
1953	1290	1962	1941		

EXPLANATION OF GROUND-WATER LEVEL RECORDS

Collection of the data

Only ground-water level data from a basic network of observation wells are published herein. This basic network contains observation wells so located that the most significant data are obtained from the fewest wells in the most important aquifers.

Each well is identified by means of (1) a 15-digit number that is based on latitude and longitude (see figure 1) and (2) a local name and a NJ-WRD well number that are provided for local needs.

Water-level measurements in this report are given in feet with reference to land-surface datum (LSD, lsd). Land-surface datum is a datum plane that is approximately at land surface at each well. The altitude of the land-surface datum above NGVD 1929, and the height of the measuring point (MP) above or below land-surface datum is given in each well description.

Measurements are made in many types of wells, under varying conditions of access and at different temperatures, hence, neither the method of measurement nor the equipment can be standardized. At each observation well, however, the equipment and techniques used are those that will ensure that measurements at each well are consistent.

Water-level data in these reports were obtained from water-level recorders, water-level extremes recorders, and from periodic manual measurements. The equipment used at each well is described in the well description under the listing "Instrumentation." Water levels in wells equipped with water-level recorders are reported for every fifth day and the end of each month (eom). Beginning in the 1977 water year, water-level recorders were removed from some wells and replaced by water-level extremes recorders. The extremes are read from these recorders at about three month intervals, but the actual dates of occurrence of the extremes (highest and lowest water levels) are unknown. In these reports the water-level extremes are given with the interim dates together with the manually measured water levels.

Water levels are reported to as many significant figures as can be justified by the local conditions. For example, in a measurement of a depth to water of several hundred feet, the error in determining the absolute value of the total depth to water may be a few tenths of a foot, whereas the error in determining the net change of water level between successive measurements may be only a hundredth or a few hundredths of a foot. For lesser depths to water the accuracy is greater. All measurements published herein are reported to a hundredth of a foot.

Publications

Table 3 below, shows the series of water-supply papers that give ground-water level data for New Jersey, 1935 to 1974. No water-level data were published in 1975. Beginning in 1976, ground-water level data for New Jersey have been published in these annual water data reports.

Table 3.--Water-supply paper (WSP) numbers, water years, 1935-74

Year	WSP	Year	WSP	Year	WSP
1935	777	1944	1016	1953	1265
1936	817	1945	1023	1954	1321
1937	840	1946	1071	1955	1404
1938	845	1947	1096	1956-57	1537
1939	886	1948	1126	1958-62	1782
1940	906	1949	1156	1963-67	1977
1941	936	1950	1165	1968-72	2140
1942	944	1951	1191	1973-74	2164
1943	986	1952	1221		

ACCESS TO WATSTORE DATA

The National WATer Data STOrage and REtrieval System (WATSTORE) was established for handling water data collected through the activities of the U.S. Geological Survey and to provide for more effective and efficient means of releasing the data to the public. The system is operated and maintained on the central computer facilities of the Survey at its National Center in Reston, Virginia.

WATSTORE can provide a variety of useful products ranging from simple data tables to complex statistical analyses. A minimal fee, plus the actual computer cost incurred in producing a desired product, is charged to the requester. Information about the availability of specific types of data, the acquisition of data or products, and user charges can be obtained locally from each of the Water Resources Division's district offices (see address given on the back of the title page).

General inquiries about WATSTORE may be directed to:

Chief Hydrologist
U.S. Geological Survey
437 National Center
Reston, Virginia 22092

SELECTED REFERENCES

Anderson, P. W., 1970, Occurrence and distribution of trace elements in New Jersey streams; New Jersey Division of Water Policy and Supply, Water Resources Circular 24, 24 p.

Anderson, P.W., and Faust, S. D., 1973 Characteristics of water quality and streamflow, Passaic River basin above Little Falls, New Jersey: U.S. Geological Survey Water-Supply Paper 2026, 80 p.

_____ 1974, Water-quality and streamflow characteristics, Raritan River basin, New Jersey: U.S. Geological Survey Water Resources Investigations 14-74, 82 p.

Anderson, P. W., and George, J. R., 1966, Water-quality characteristics of New Jersey streams: U.S. Geological Survey Water-Supply Paper 1819-G, 48 p.

Barnett, P. R., and Mallory, Jr., E. C., 1971, Determination of minor elements in water by emission spectroscopy: U.S. Geological Survey Techniques of Water-Resources Investigations, book 5, Chapter A2, 31 p.

Carter, R. W., and Davidian, Jacob, 1968, General procedure for gaging streams: U.S. Geological Survey Techniques Water-Resources Investigations, Book 3, Chapter A6, 13 p.

Corbett, D. M., and others, 1943, Stream-gaging procedure, a manual describing methods and practices of the Geological Survey: U.S. Geological Survey Water-Supply Paper 888, 245 p.

Fusillo, T. V., 1982, Impact of suburban suburban residential development on water resources in the area of Winslow Township, Camden County, New Jersey: U.S. Geological Survey Water-Resources Investigations 81-27, 38 p.

Fusillo, T. V., and Voronin, L. M., 1982, Water-quality data for the Potomac-Raritan-Magothy aquifer system, Trenton to Pennsville, New Jersey, 1980: U.S. Geological Survey Open-File Report 81-814, 38 p. 2 pls.

Fusillo, T. V., Schornick, J. C., Jr., Koester, H. E., and Harriman, D. A., 1980, Investigation of acidity and other water-quality characteristics of Upper Oyster Creek Ocean County, New Jersey: U.S. Geological Survey Water-Resources Investigations 80-10, 30 p.

Gillespie, B. D., and Schopp, R. D., 1982, Low-flow characteristics and flow duration of New Jersey streams: U.S. Geological Survey Open-File Report 81-1110, 164 p.

Goerlitz, D. F., and Brown, Eugene, 1972, Methods for analysis of organic substances in water: U.S. Geological Survey Techniques of Water-Resources Investigations, Book 5, Chapter A3, 40 p.

Greeson, P. E., Ehlke, T. A., Irwin, G. A., Lium, B. W., and Slack, K. V., 1977, Methods for collection and analysis of aquatic biological and microbiological samples: U.S. Geological Survey Techniques of Water-Resources Investigations, Book 5, Chapter A4, 332 p.

Guy, H. P., 1969, Laboratory theory and methods for sediment analysis: U.S. Geological Survey Techniques of Water-Resources Investigations, Book 5, Chapter C1, 58 p.

____1970, Fluvial sediment concepts: U.S. Geological Survey Techniques of Water-Resources Investigations, Book 3, Chapter C1, 55 p.

Guy, H. P., and Norman, V. W., 1970, Field methods for measurement of fluvial sediment: U.S. Geological Survey Techniques of Water-Resources Investigations, Book 3, Chapter C2, 59 p.

Harriman, D. A., and Velnich, A. J., 1982, Flood data in West Windsor Township, Mercer County, New Jersey through 1982 Water Year: U.S. Geological Survey Open-File Report.

Hem, J. D., 1970, Study and interpretation of the chemical characteristics of natural water, 2d ed.: U.S. Geological Survey Water-Supply Paper 1473, 363 p.

Hindall, S. M., and Jungblut, D. W., [no date], Sediment yields of New Jersey streams: U.S. Geological Survey Open-File Report 80-432, 1 sheet.

Hochreiter, J. J., Jr., 1982, Chemical-quality reconnaissance of the water and surficial bed material in the Delaware River estuary and adjacent New Jersey tributaries, 1980-81: U.S. Geological Survey Water-Resources Investigations 82-36, 41 p.

Langbein, W. B., and Iseri, K. T., 1960, General introduction of hydrologic definitions: U.S. Geological Survey Water-Supply Paper 1541-A, 29 p.

Laskowski, S. L., 1970, Statistical summaries of New Jersey streamflow records: New Jersey Division of Water Policy and Supply, Water Resources Circular 23, 264 p.

Lohman, S. W., and other, 1972, Definitions of selected ground-water terms-revisions and conceptual refinements: U.S. Geological Survey Water-Supply Paper 1988, 21 p.

Luzier, J. E., 1980, Digital-simulation and projection of head changes in the Potomac-Raritan-Magothy aquifer system, Coastal Plain, New Jersey: U.S. Geological Survey Water-Resources Investigations 80-11, 72 p.

Mansue, L. J., and Anderson, P. W., 1974, Effect of landuse and retention practices on sediment yields in the Stony Brook basin, New Jersey: U.S. Geological Survey Water-Supply Paper 1798-L.

McCall, J. E., and Lendo, A. C., 1970, A modified streamflow data program for New Jersey: U.S. Geological Survey Open-File Report, 46 p.

Porterfield, George, 1972, Computations of fluvial-sediment discharge: U.S. Geological Survey Techniques of Water-Resources Investigations, Book 3, Chapter C3, 66 p.

Rantz, S. E., and others, 1982, Measurement and Computation of Streamflow; Volume 1. Measurement of Stage and Discharge, Volume 2. Computation of Discharge: U.S. Geological Survey Water-Supply Paper 2175, 631 p.

Schaefer, F. L., and Walker, R. L., 1982, Saltwater intrusion into the Old Bridge aquifer in the Keyport-Union Beach area of Monmouth County, New Jersey: U.S. Geological Survey Water-Supply Paper 2184, 21 p.

Schaefer, F. L., 1983, Distribution of Chloride Concentrations in the Principal Aquifers of the New Jersey Coastal Plain, 1977-81: U.S. Geological Survey Water-Resources Investigations Report 83-4061, 56 p.

Schornick, J. C., and Ram, N. M., 1978, Nitrification in four acidic streams in southern New Jersey: U.S. Geological Survey Water-Resources Investigations, 77-121, 51 p.

Schornick, J. C., and Fishel, D. K., 1980, Effects of storm runoff on water quality in the Mill Creek drainage basin, Willingboro, New Jersey: U.S. Geological Survey Water-Resources Investigations 80-98, 111 p.

Schopp, R. D., and Gillespie, B. D., 1979, Selected streamflow data for the Delaware River basin: U.S. Geological Survey Open-File Report 79-347, 16 p.

Schopp, R. D., and Velnich, A. J., 1979, Flood of November 8-10, 1977 in Northeastern and Central New Jersey: U.S. Geological Survey Open-File Report 79-559, 32 p.

Seaber, P. R., 1963, Chloride concentrations of water from wells in the Atlantic Coastal Plain of New Jersey, 1923-61: New Jersey Division of Water Policy and Supply, Special Report 22, 250 p.

Skougstad, M. W., Fishman, M. J., Friedman, L. C., Erdmann, D. E., and Duncan, S. S., 1978, Methods for determination of inorganic substances in water and fluvial sediments: U.S. Geological Survey Techniques of Water-Resources Investigations, Book 5, Chapter A1, 626 p.

Stankowski, S. J., 1972, Floods of August and September 1971 in New Jersey: New Jersey Division of Water Resources, Special Report 37, 329 p.

Stankowski, S. J., and Velnich, A. J., 1974, A summary of peak stages and discharges for the flood of August 1973 in New Jersey: U.S. Geological Survey Open-File Report, 12 p.

Stankowski, S. J., 1974, Magnitude and frequency of floods in New Jersey with effects of urbanization: New Jersey Department of Environmental Protection, Division of Water Resources, Special Report 38, 46 p.

Stankowski, S. J., Schopp, R. D., and Velnich, A. J., 1975, Flood of July 21, 1975 in Mercer County, New Jersey: U.S. Geological Survey Water-Resources Investigations 51-75, 52 p.

Stevens, Jr., Herbert H., Ficke, John F., and Smoot, George F., 1975, Water temperature-influential factors, field measurement, and data representation: U.S. Geological Survey Techniques of Water-Resources Investigations, Book 1, Chapter D1, 65 p.

U.S. Environmental Protection Agency, 1976, National Interim Primary Drinking Water Regulations: U.S. Environmental Protection Agency report EPA 570/9-76-003, 159 p.

U.S. Geological Survey, 1976, Surface water supply of the United States, 1966-70, Part 1. North Atlantic Slope basins, Volume 2. Basins from New York to Delaware: U.S. Geological Survey Water-Supply Paper 2102, 985 p., (most recent volume).

____1977, Ground-water levels in the United States, 1973-74, Northeastern States: U.S. Geological Survey Water-Supply Paper 2164, 126 p., (most recent volume).

Vecchioli, John, and Miller, E. G., 1973, Water Resources of the New Jersey part of the Ramapo River basin: U.S. Geological Survey Water-Supply Paper 1974, 77 p.

Velnich, A.J., and Laskowski, S.L., 1979, Technique for estimating depth of 100-year flood in New Jersey: U.S. Geological Survey Open-File Report 79-419, 17 p.

Velnich, A.J., 1982, Drainage Areas in New Jersey: Delaware River Basin and Streams Tributary to Delaware Bay: U.S. Geological Survey Open-File Report 82-572, 48 p.

Velnich, A.J., 1984, Drainage Areas in New Jersey: Atlantic Coastal Basins, South Amboy to Cape May: U.S. Geological Survey Open-File Report 84-150, 33 p.

Vickers, A. A., and McCall, J. E., 1968, Surface water supply of New Jersey, Streamflow records 1961-65: New Jersey Division of Water Policy and Supply, Special Report 31, 351 p., (most recent volume).

Vickers, A. A., 1982, Flood of August 31 - September 1, 1978, in Crosswicks Creek Basin and vicinity, Central New Jersey: U.S. Geological Survey Water-Resources Investigations 80-115, 20 p.

Vickers, A. A., Farsett, H. A., and Green, J. W., 1982, Flood peaks and discharge summaries in the Delaware River basin: U.S. Geological Survey Open-File Report 81-912, 292 p.

Walker, R. L., 1983, Evaluation of water levels in major aquifers of the New Jersey Coastal Plain, 1978: U.S. Geological Survey Water-Resources Investigations 82-4077, 56 p.

PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS

Thirty-seven manuals by the U.S. Geological Survey have been published to date in the series on techniques describing procedures for planning and executing specialized work in water-resources investigations. The material is grouped under major subject headings called books and is further divided into sections and chapters. For example, Section A of Book 3 (Applications of Hydraulics) is on surface water. The chapter, the unit of publication, is limited to a narrow field of subject matter. This format permits flexibility in revision and publication as the need arises. The reports listed below are for sale by the U.S. Geological Survey, Branch of Distribution, 604 South Pickett St., Alexandria, VA 22304 (authorized agent of the Superintendent of Documents, Government Printing Office).

NOTE: When ordering any of these publications, please give the title, book number, chapter number, and "U.S. Geological Survey Techniques of Water-Resources Investigations".

1-D1. *Water temperature--influential factors, field measurement, and data presentation*, by H. H. Stevens, Jr., J. F. Ficke, and G. F. Smoot: USGS--TWRI Book 1, Chapter D1. 1975. 65 pages.

1-D2. *Guidelines for collection and field analysis of ground-water samples for selected unstable constituents*, by W. W. Wood: USGS--TWRI Book 1, Chapter D2. 1976. 24 pages.

2-D1. *Application of surface geophysics to ground-water investigations*, by A. A. R. Zohdy, G. P. Eaton, and D. R. Mabey: USGS--TWRI Book 2, Chapter D1. 1974. 116 pages.

2-E1. *Application of borehole geophysics to water-resources investigations*, by W. S. Keys and L. M. MacCary: USGS--TWRI Book 2, Chapter E1. 1971. 126 pages.

3-A1. *General field and office procedures for indirect discharge measurements*, by M. A. Benson and Tate Dalrymple: USGS--TWRI Book 3, Chapter A1. 1967. 30 pages.

3-A2. *Measurement of peak discharge by the slope-area method*, by Tate Dalrymple and M. A. Benson: USGS--TWRI Book 3, Chapter A2. 1967. 12 pages.

3-A3. *Measurement of peak discharge at culverts by indirect methods*, by G. L. Bodhaine: USGS--TWRI Book 3, Chapter A3. 1968. 60 pages.

3-A4. *Measurement of peak discharge at width contractions by indirect methods*, by H. F. Matthai: USGS--TWRI Book 3, Chapter A4. 1967. 44 pages.

3-A5. *Measurement of peak discharge at dams by indirect methods*, by Harry Hulsing: USGS--TWRI Book 3, Chapter A5. 1967. 29 pages.

3-A6. *General procedure for gaging streams*, by R. W. Carter and Jacob Davidian: USGS--TWRI Book 3, Chapter A6. 1968. 13 pages.

3-A7. *Stage measurements at gaging stations*, by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3, Chapter A7. 1968. 28 pages.

3-A8. *Discharge measurements at gaging stations*, by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3, Chapter A8. 1969. 65 pages.

3-A9. *Measurement of time of travel and dispersion in streams by dye tracing*, by E. F. Hubbard, F. A. Kilpatrick, L. A. Martens, and J. F. Wilson, Jr.: USGS--TWRI Book 3, Chapter A9. 1982. 44 pages.

3-A11. *Measurement of discharge by moving-boat method*, by G. F. Smoot and C. E. Novak: USGS--TWRI Book 3, Chapter A11. 1969. 22 pages.

3-B1. *Aquifer-test design, observation, and data analysis*, by R. W. Stallman: USGS--TWRI Book 3, Chapter B1. 1971. 26 pages.

3-B2. *Introduction to ground-water hydraulics, a programed text for self-instruction*, by G. D. Bennett: USGS--TWRI Book 3, Chapter B2. 1976. 172 pages.

3-B3. *Type curves for selected problems of flow to wells in confined aquifers*, by J. E. Reed: USGS--TWRI Book 3, Chapter B3. 1980. 106 pages.

3-C1. *Fluvial sediment concepts*, by H. P. Guy: USGS--TWRI Book 3, Chapter C1. 1970. 55 pages.

3-C2. *Field methods for measurement of fluvial sediment*, by H. P. Guy and V. W. Norman: USGS--TWRI Book 3, Chapter C2. 1970. 59 pages.

3-C3. *Computation of fluvial-sediment discharge*, by George Porterfield: USGS--TWRI Book 3, Chapter C3. 1972. 66 pages.

4-A1. *Some statistical tools in hydrology*, by H. C. Riggs: USGS--TWRI Book 4, Chapter A1. 1968. 39 pages.

4-A2. *Frequency curves*, by H. C. Riggs: USGS--TWRI Book 4, Chapter A2. 1968. 15 pages.

4-B1. *Low-flow investigations*, by H. C. Riggs: USGS--TWRI Book 4, Chapter B1. 1972. 18 pages.

4-B2. *Storage analyses for water supply*, by H. C. Riggs and C. H. Hardison: USGS--TWRI Book 4, Chapter B2. 1973. 20 pages.

4-B3. *Regional analyses of streamflow characteristics*, by H. C. Riggs: USGS--TWRI Book 4, Chapter B3. 1973. 15 pages.

4-D1. *Computation of rate and volume of stream depletion by wells*, by C. T. Jenkins: USGS--TWRI Book 4, Chapter D1. 1970. 17 pages.

5-A1. *Methods for determination of inorganic substances in water and fluvial sediments*, by M. W. Skougstad and others, editors: USGS--TWRI Book 5, Chapter A1. 1979. 626 pages.

5-A2. *Determination of minor elements in water by emission spectroscopy*, by P. R. Barnett and E. C. Mallory, Jr.: USGS--TWRI Book 5, Chapter A2. 1971. 31 pages.

5-A3. *Methods for analysis of organic substances in water*, by D. F. Goerlitz and Eugene Brown: USGS--TWRI Book 5, Chapter A3. 1972. 40 pages.

5-A4. *Methods for collection and analysis of aquatic biological and microbiological samples*, edited by P. E. Greeson, T. A. Ehlke, G. A. Irwin, B. W. Lium, and K. V. Slack: USGS--TWRI Book 5, Chapter A4. 1977. 332 pages.

5-A5. *Methods for determination of radioactive substances in water and fluvial sediments*, by L. L. Thatcher, V. J. Janzer, and K. W. Edwards: USGS--TWRI Book 5, Chapter A5. 1977. 95 pages.

5-C1. *Laboratory theory and methods for sediment analysis*, by H. P. Guy: USGS--TWRI Book 5, Chapter C1. 1969. 58 pages.

7-C1. *Finite difference model for aquifer simulation in two dimensions with results of numerical experiments*, by P. C. Trescott, G. F. Pinder, and S. P. Larson: USGS--TWRI Book 7, Chapter C1. 1976. 116 pages.

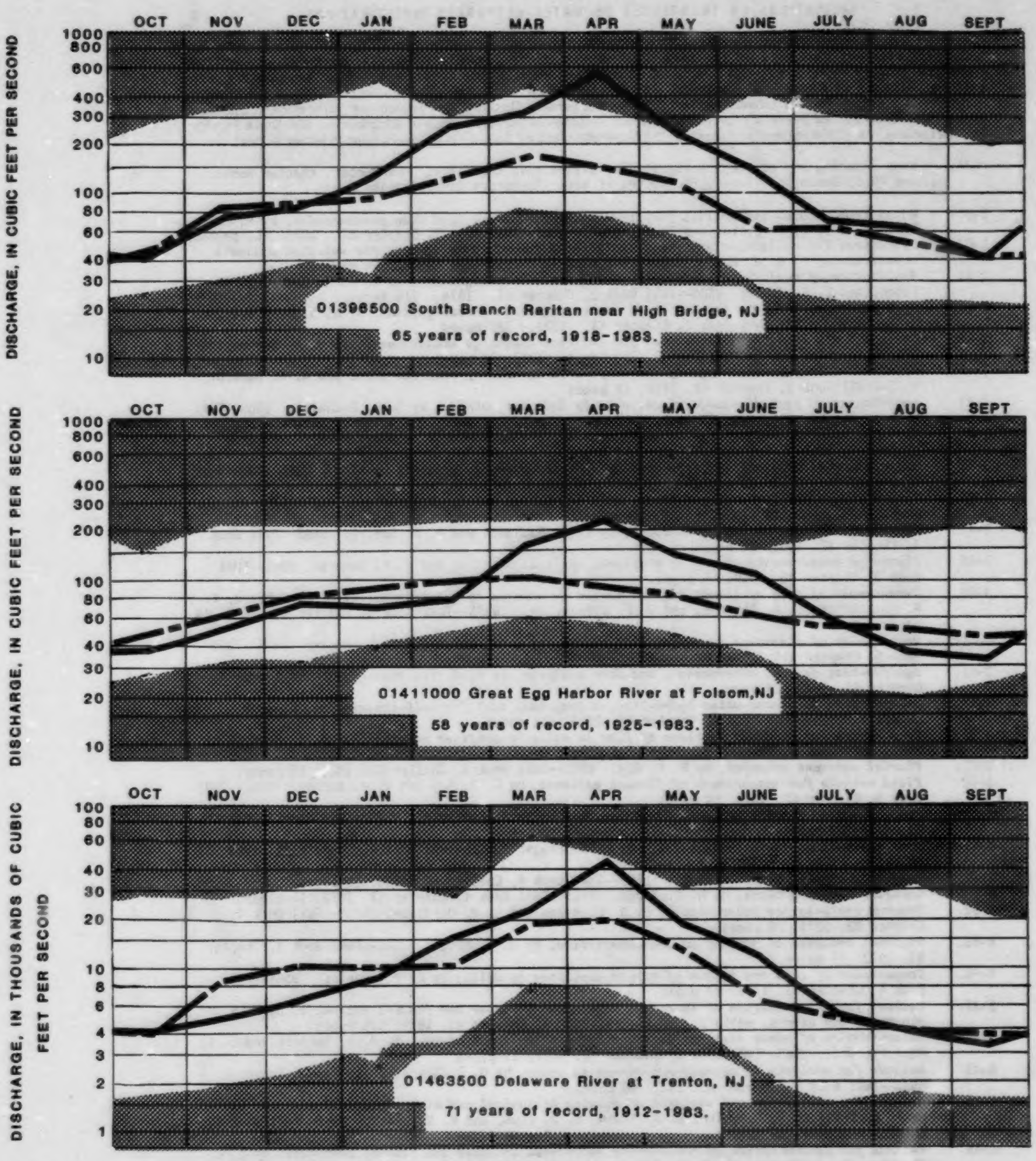
7-C2. *Computer model of two-dimensional solute transport and dispersion in ground water*, by L. F. Konikow and J. D. Bredehoeft: USGS--TWRI Book 7, Chapter C2. 1978. 90 pages.

7-C3. *A model for simulation of flow in singular and interconnected channels*, by R. W. Schaffranek, R. A. Baltzer, and D. E. Goldberg: USGS--TWRI Book 7, Chapter C3. 1981. 110 pages.

8-A1. *Methods of measuring water levels in deep wells*, by M. S. Garber and F. C. Koopman: USGS--TWRI Book 8, Chapter A1. 1968. 23 pages

8-B2. *Calibration and maintenance of vertical-axis type current meters*, by G. F. Smoot and C. E. Novak: USGS--TWRI Book 8, Chapter B2. 1968. 15 pages.

Preceding page blank



Unshaded area.--Indicates range between highest and lowest mean recorded for the month, prior to 1983 water year.

Dashed line.--Indicates normal (median of the monthly means) for the standard reference period, 1951-1980.

Solid line.--Indicates observed monthly mean flow for the 1983 water year.

FIGURE 2.--MONTHLY STREAMFLOW AT KEY GAGING STATIONS.

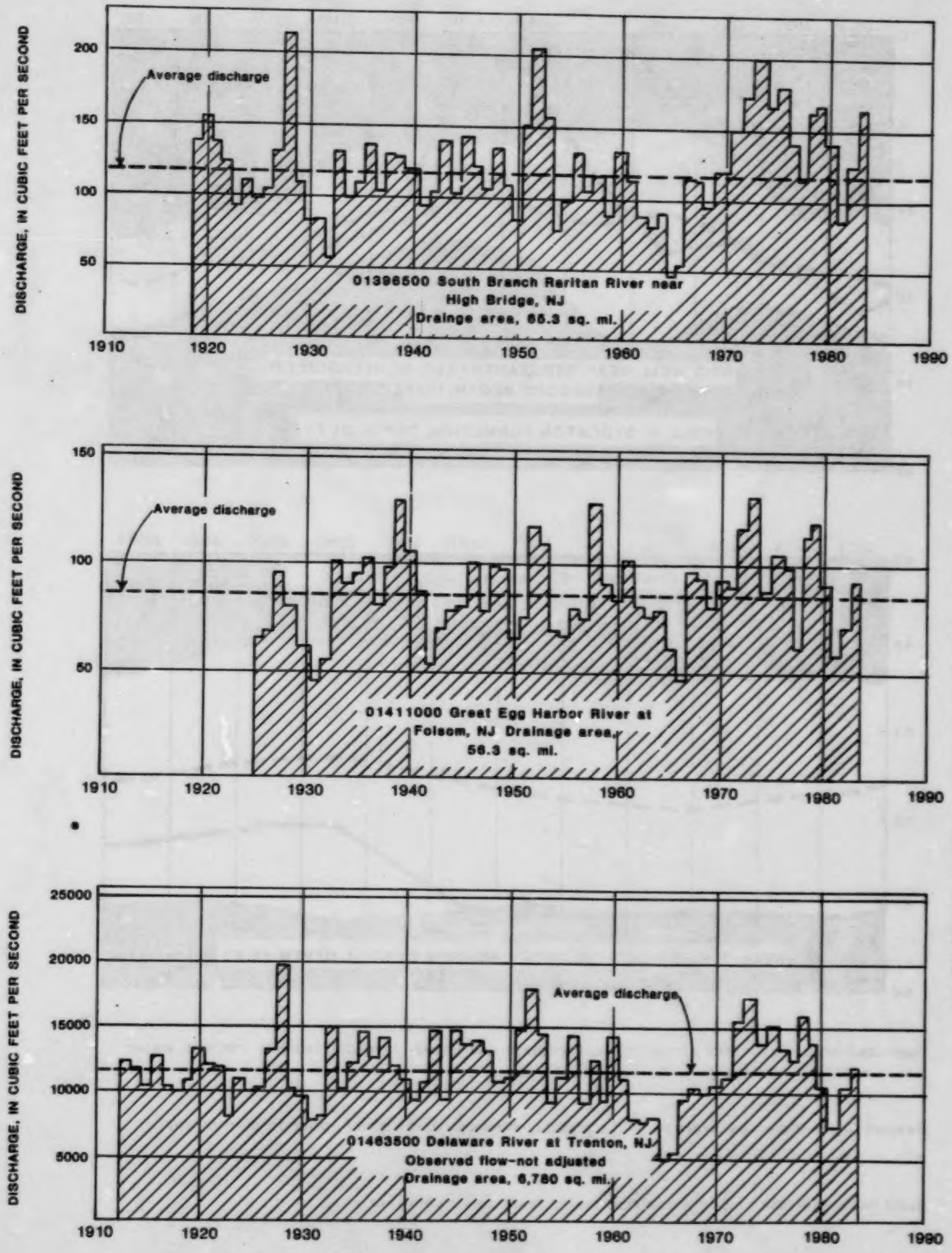
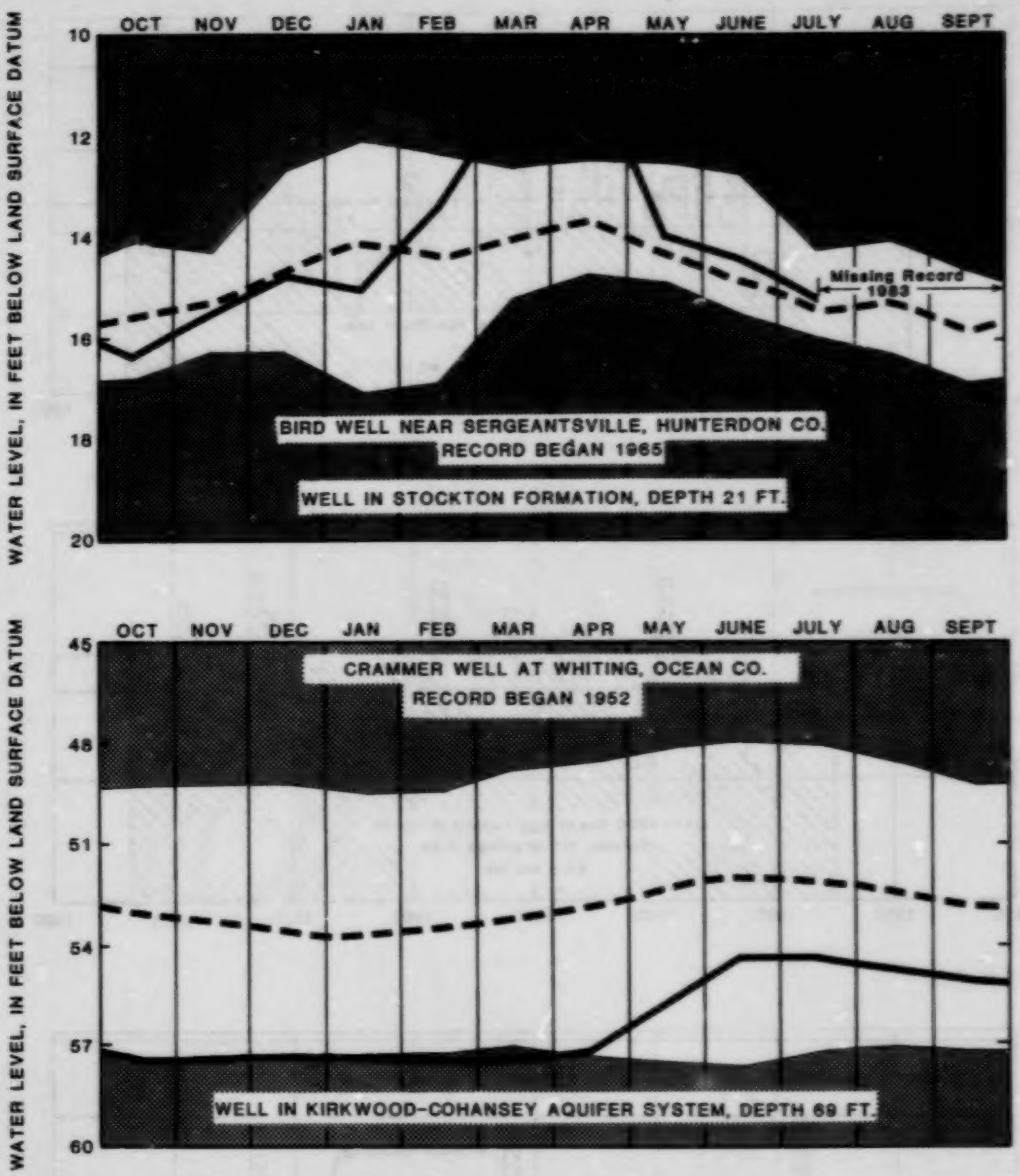


FIGURE 3.--ANNUAL MEAN DISCHARGE AT KEY GAGING STATIONS



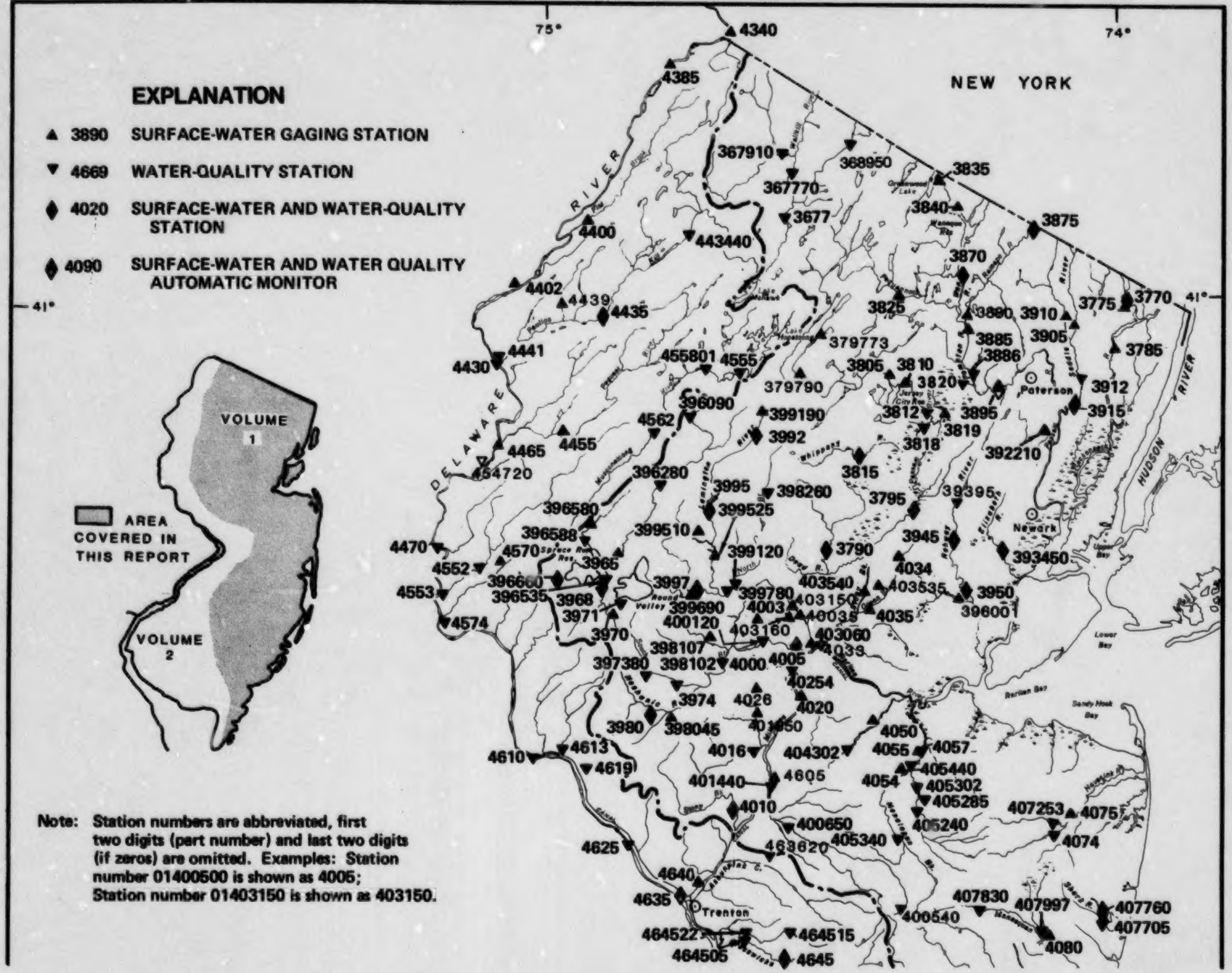
Unshaded area.--Indicates range between highest and lowest recorded monthly minimum water levels, prior to the current year.

Dashed line.--Indicates average of the monthly minimum water levels, prior to current year.

Solid line.--Indicates monthly minimum water level for the current year.

FIGURE 4.--MONTHLY GROUND-WATER LEVELS AT KEY OBSERVATION WELLS.

WATER RESOURCES DATA FOR NEW JERSEY, 1983



EXPLANATION

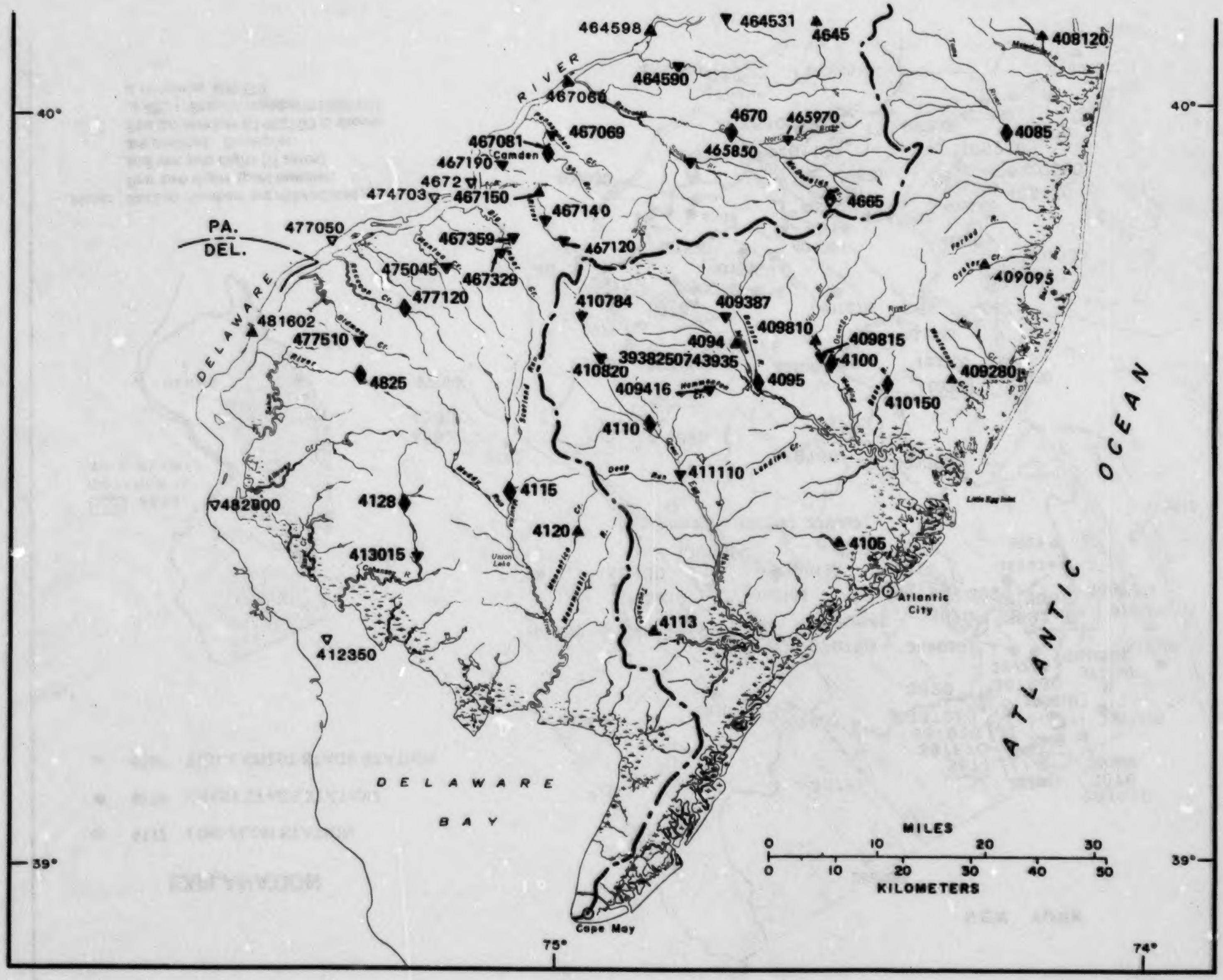
- ▲ 3890 SURFACE-WATER GAGING STATION
- ▼ 4669 WATER-QUALITY STATION
- ◆ 4020 SURFACE-WATER AND WATER-QUALITY STATION
- ◆ 4090 SURFACE-WATER AND WATER QUALITY AUTOMATIC MONITOR

▨ AREA COVERED IN THIS REPORT

Note: Station numbers are abbreviated, first two digits (part number) and last two digits (if zeros) are omitted. Examples: Station number 01400500 is shown as 4005; Station number 01403150 is shown as 403150.

75°
74°
41°
41°
NEW YORK
DELAWARE RIVER
HUDSON RIVER
VOLUME 1
VOLUME 2
Paterson
Newark
Trenton
Raritan Bay
Sandy Hook Bay
Lower Bay
4340
4385
367910
368950
3835
367770
3840
3677
3875
4400
443440
3870
4402
4439
4435
3825
3880
3910
3775
3770
379773
3885
3905
4441
4430
455801
4555
3805
3810
3886
3785
379790
3820
3912
396090
3812
3895
3915
4562
399190
3819
3818
4465
4455
3992
392210
454720
3815
396280
3795
39395
3995
398260
396580
399525
3945
399510
396588
3790
393450
4470
4570
399120
3965
4034
4552
403540
403535
3950
396600
3997
399780
396535
3968
403150
396001
4553
3971
399690
4003
400120
40035
4035
4574
403160
3970
403060
398107
4033
397380
398102
4000
4005
40254
3974
4026
4020
3980
398045
401650
4050
4613
4016
404302
4055
4057
4610
4619
401440
4605
405440
4054
405302
405285
4010
400650
407253
4075
405240
4625
405340
4074
463620
4640
407830
407997
407760
4635
400540
407705
464522
464515
4080
464505
4645

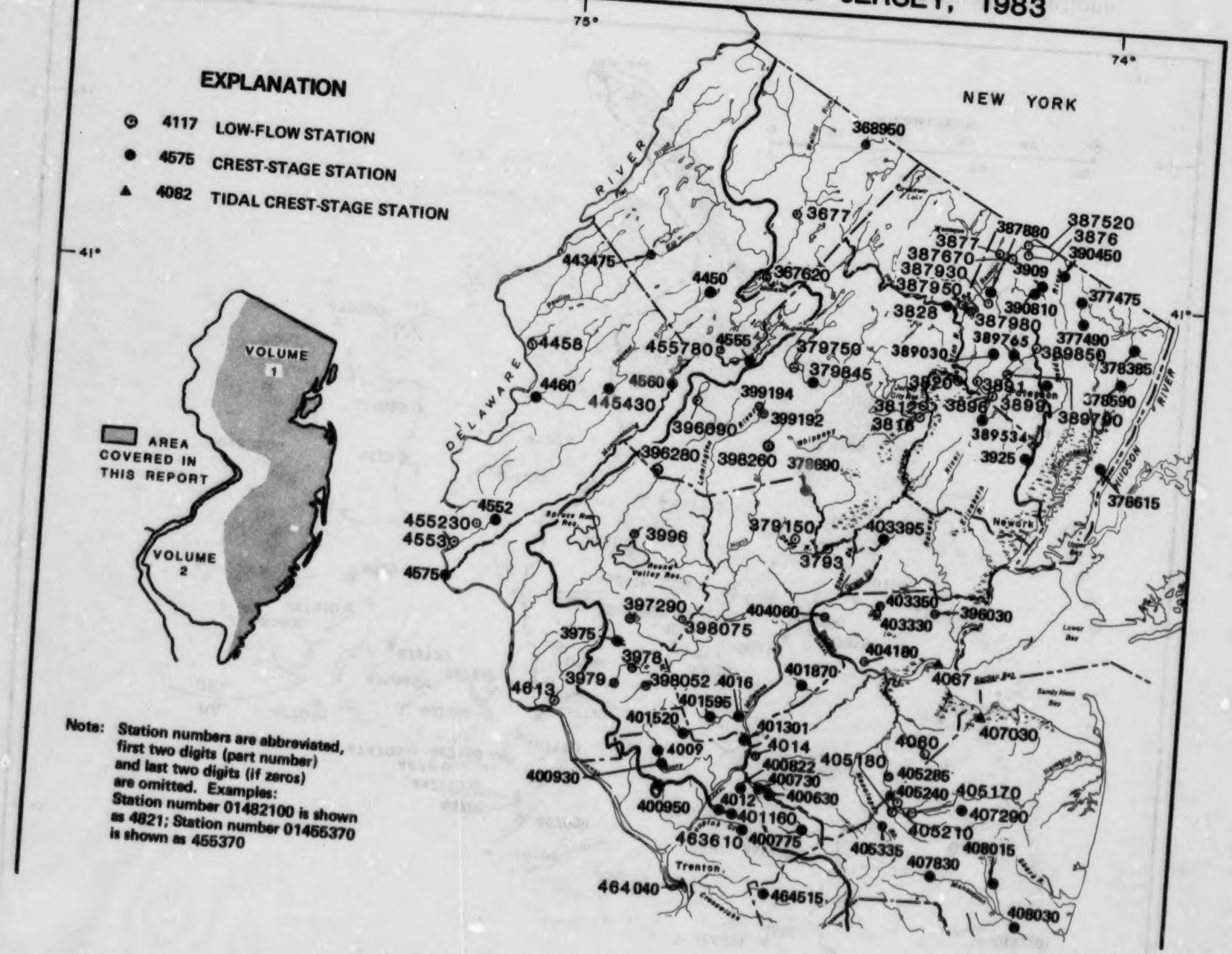
Preceding page blank



464598
464531
4645
408120
RIVER
464590
467060
40°
40°
4670
465970
4085
467069
467081
Camden
465850
467190
4672
4665
474703
467150
467140
PA.
DEL.
477050
467359
467120
475045
467329
409095
DELAWARE
477120
410784
409387
481602
409810
477510
4094
409815
3938250743935
4100
4825
410820
4095
409280
409416
410150
4110
411110
OCEAN
4115
482900
4128
4120
4105
413015
Union Lake
ATLANTIC
Atlantic City
4113
412350
DELAWARE
BAY
MILES
0
10
20
30
0
10
20
30
40
50
KILOMETERS
39°
39°
Cape May
75°
74°

Figure 5.--Location of surface-water gaging stations and water-quality stations.

WATER RESOURCES DATA FOR NEW JERSEY, 1983


EXPLANATION
⊙ 4117 LOW-FLOW STATION
● 4575 CREST-STAGE STATION
▲ 4082 TIDAL CREST-STAGE STATION
AREA COVERED IN THIS REPORT
VOLUME 1
VOLUME 2
75°
74°
41°
41°
NEW YORK
DELAWARE RIVER
HUDSON RIVER
Newark
Trenton
Lower Bay
Sandy Hook Bay
Round Valley Res.
Spruce Run Res.
368950
3677
367620
443475
4450
4458
4460
455780
4555
4560
445430
4552
455230
4553
4575
379750
379845
399194
399192
396690
396280
398260
378690
3996
379150
3793
403395
387520
3876
390450
387880
3877
387670
387930
387950
3909
3828
390810
387980
377475
377490
389765
389030
389850
378385
3820
3891
3812
3816
3896
3899
378590
389700
389534
3925
378615
397290
398075
404060
403350
403330
396030
404180
4067
3975
3978
3979
398052
4016
401870
401595
401520
401301
4014
4009
4613
400930
400822
400730
400630
4012
400950
401160
400775
463610
464040
464515
4060
407030
405180
405285
405240
405170
407290
405210
405335
408015
407830
408030

Note: Station numbers are abbreviated, first two digits (part number) and last two digits (if zeros) are omitted. Examples: Station number 01482100 is shown as 4821; Station number 01455370 is shown as 455370

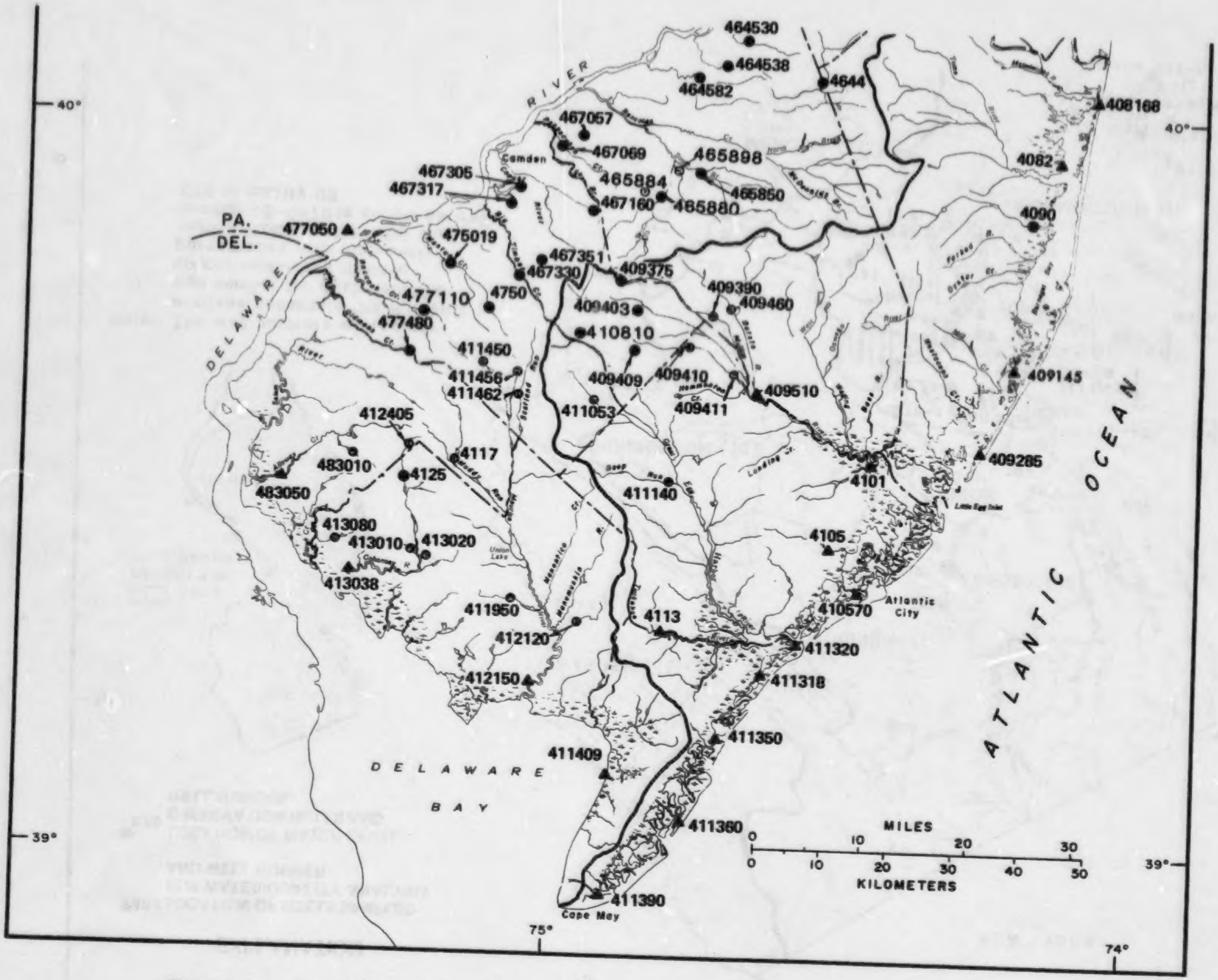
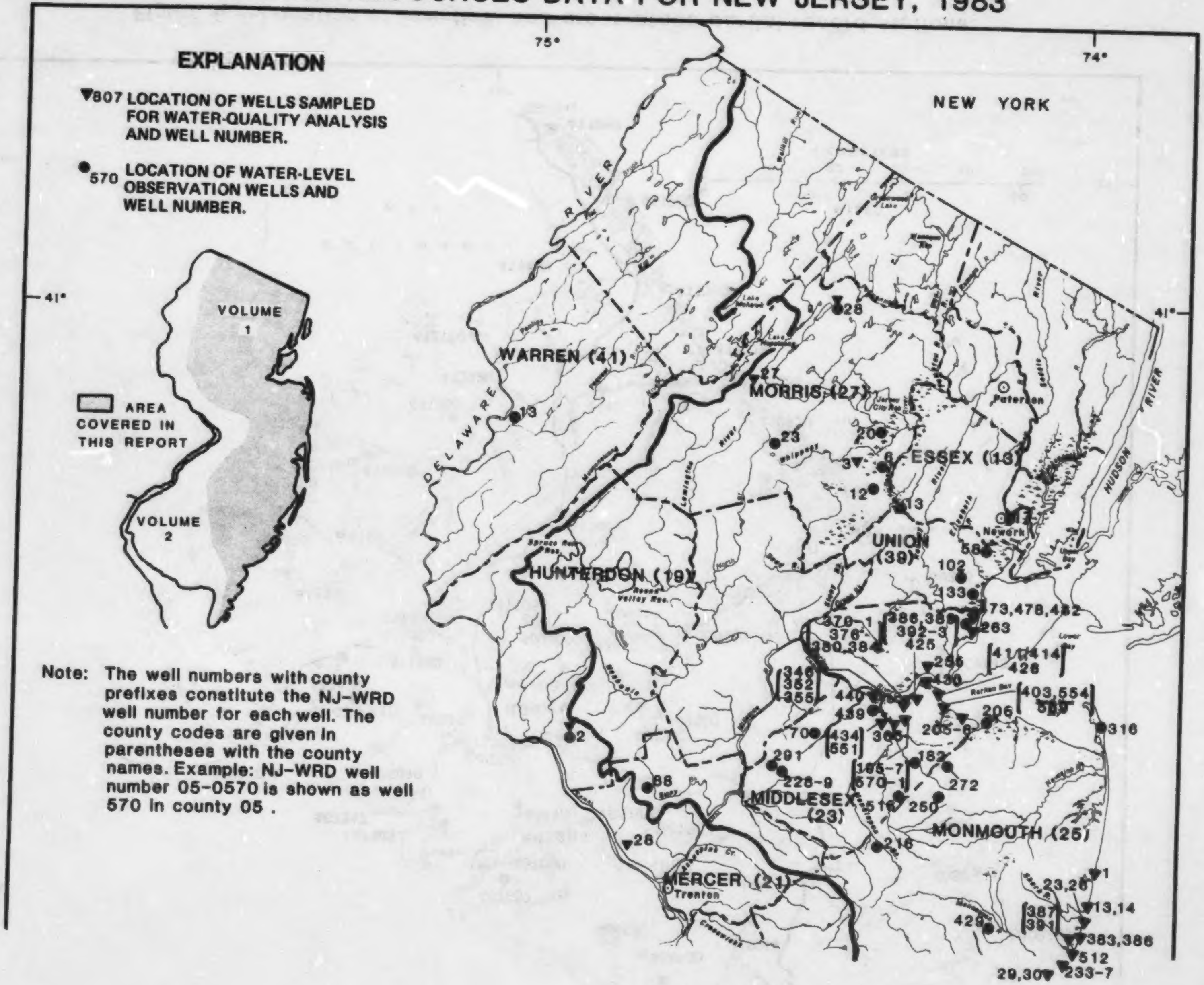

40°
39°
74°
75°
464530
464538
464582
4644
408168
467057
467069
465898
467305
467317
465884
465850
467160
465880
4082
4090
PA.
DEL.
477050
475019
467351
467330
409375
409390
409460
4750
477110
409403
477480
410810
411450
409410
411456
409409
409145
411462
409510
409411
411053
412405
4117
409285
483010
4125
4101
483050
411140
413080
4105
413010
413020
413038
411950
410570
4113
412120
411320
412150
411318
411350
411409
411360
411390
Camden
Cape May
Atlantic City
Union Lake
Little Egg Inlet
DELAWARE RIVER
DELAWARE BAY
ATLANTIC OCEAN
MILES
0
10
20
30
0
10
20
30
40
50
KILOMETERS

Figure 6.--Location of low-flow and crest-stage partial record stations.

WATER RESOURCES DATA FOR NEW JERSEY, 1983



EXPLANATION

▼807 LOCATION OF WELLS SAMPLED FOR WATER-QUALITY ANALYSIS AND WELL NUMBER.

●570 LOCATION OF WATER-LEVEL OBSERVATION WELLS AND WELL NUMBER.

▨ AREA COVERED IN THIS REPORT

Note: The well numbers with county prefixes constitute the NJ-WRD well number for each well. The county codes are given in parentheses with the county names. Example: NJ-WRD well number 05-0570 is shown as well 570 in county 05 .

75°
74°
41°
41°
NEW YORK
VOLUME 1
VOLUME 2
DELAWARE RIVER
HUDSON RIVER
WARREN (41)
MORRIS (27)
ESSEX (13)
UNION (39)
HUNTERDON (19)
MIDDLESEX (23)
MONMOUTH (25)
MERCER (21)
Paterson
Newark
Trenton
Raritan Bay
13
28
27
23
20
3
6
12
13
58
102
133
173,478,482
263
370-1
376
380,384
386,389
392-3
425
41,414
426
255
430
346
352
355
440
439
70
434
551
365
205-6
206
403,554
316
291
228-9
165-7
570-1
182
272
516
250
216
2
88
28
1
23,26
387
391
13,14
383,386
512
429
29,30
233-7

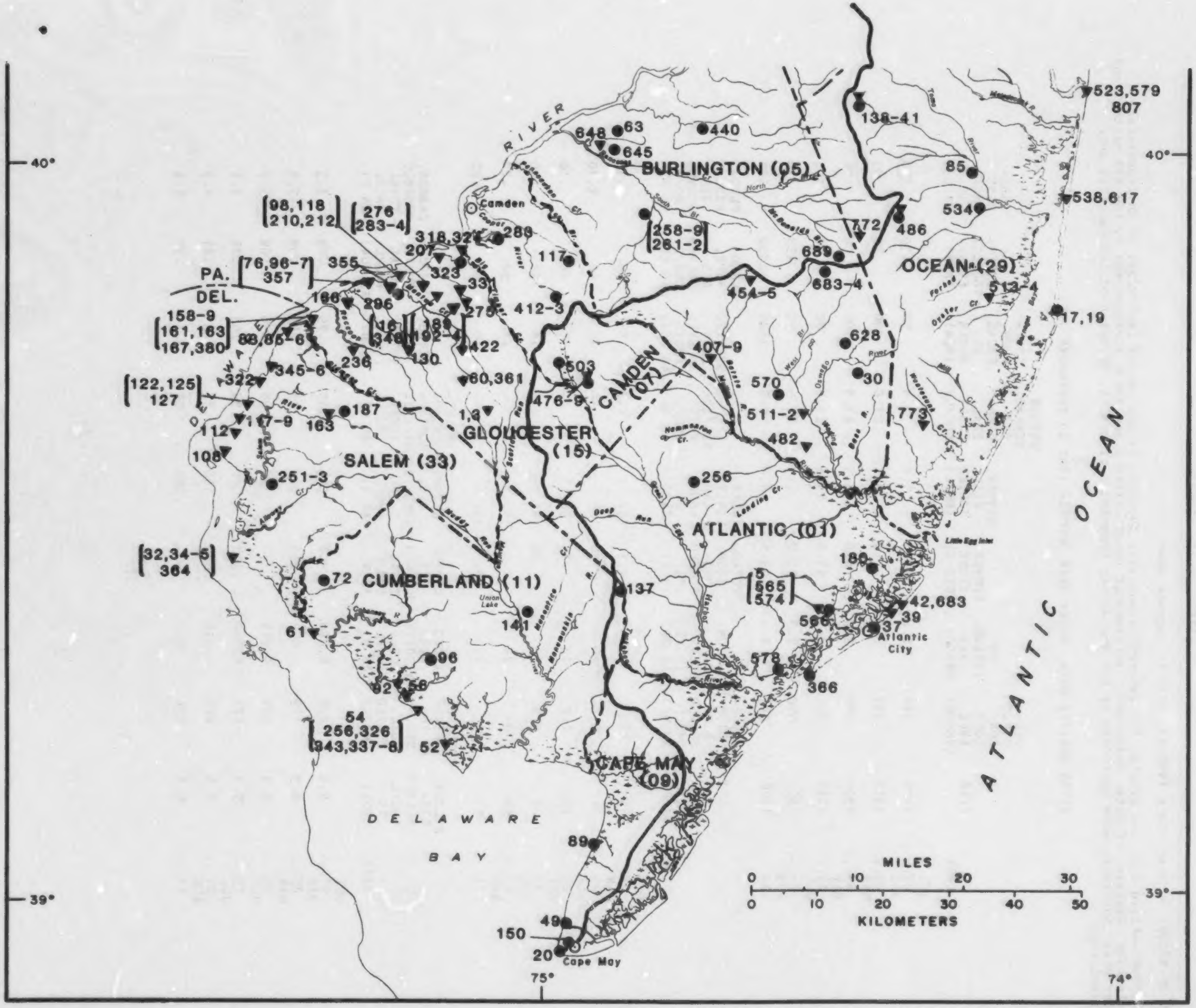

40°
39°
75°
74°
RIVER
Camden
PA.
DEL.
BURLINGTON (05)
CAMDEN (07)
GLOUCESTER (15)
SALEM (33)
CUMBERLAND (11)
ATLANTIC (01)
OCEAN (29)
CAPE MAY (09)
DELAWARE BAY
ATLANTIC OCEAN
Atlantic City
Cape May
Union Lake
Little Egg Inlet
523,579 807
138-41
440
648
63
645
85
538,617
534
486
772
689
683-4
454-5
258-9 261-2
98,118 210,212
276 283-4
318,321
288
207
323
331
117
355
76,96-7 357
166
296
275
412-3
158-9 161,163 167,380
88,85-6
236
130
422
407-9
628
30
513-4
17,19
345-6
322
122,125 127
117-9
112
108
163
187
60,361
1,3
503
476-9
570
511-2
482
773
251-3
256
32,34-5 364
72
137
141
5 565 574
566
180
42,683
39
37
578
366
61
96
62
56
54 256,326 343,337-8
52
89
49
150
20
MILES
0
10
20
30
40
50
KILOMETERS

Figure 7. -- Map showing location of ground-water quality stations and observation wells.

HUDSON RIVER BASIN

01367700 WALLKILL RIVER AT FRANKLIN, NJ

LOCATION.--Lat 41°06'43", long 74°35'21", Sussex County, Hydrologic Unit 02020007, at bridge 120 ft downstream from dam at outlet of Franklin Pond in Franklin, and 0.8 mi upstream from Wildcat Brook.

DRAINAGE AREA.--29.4 mi^2.

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1959-63, 1976 to current year.

COOPERATION.--Field data and samples for laboratory analyses supplied by New Jersey Department of Environmental Protection, Division of Water Resources. Analyses of fecal coliform and fecal streptococci by the MPN method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, FECAL, EC BROTH (MPN)	STREPTOCOCCI FECAL (MPN)	HARDNESS (MG/L AS CACO3)
OCT 07...	1100	398	8.2	17.0	7.6	2.4	50	130	150
JAN 25...	1315	357	8.0	.0	13.7	E1.6	490	70	93
MAR 29...	1300	246	8.1	6.0	12.5	E1.3	490	15	76
MAY 19...	1330	305	8.7	13.0	11.8	E1.8	20	70	100
JUL 21...	1330	502	7.8	26.0	7.4	E1.8	80	250	170
AUG 11...	1300	463	8.4	23.5	8.0	4.9	1300	>2400	170

DATE	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	SULFIDE TOTAL (MG/L AS S)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)
OCT 07...	35	15	25	1.1	102	<.5	15	46	.10
JAN 25...	24	8.0	20	.80	67	--	16	46	<.10
MAR 29...	19	7.0	15	.70	58	--	15	26	.10
MAY 19...	26	9.5	16	.90	87	<.5	16	31	.10
JUL 21...	40	18	24	2.0	145	--	21	52	.20
AUG 11...	37	18	27	2.0	132	--	19	51	.20

DATE	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHATE, TOTAL (MG/L AS PO4)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 07...	5.8	238	E.020	.300	.050	.45	.75	.09	3.3
JAN 25...	6.3	179	.010	.200	.090	.23	.43	.09	3.8
MAR 29...	5.5	139	<.010	.300	.110	.26	.56	.09	3.9
MAY 19...	<5.1	171	<.010	.300	.080	.33	.63	.15	3.6
JUL 21...	4.6	279	.030	.600	.160	.68	1.3	.21	4.3
AUG 11...	5.4	297	.030	.400	.080	.94	1.3	.37	4.4

01367700 WALLKILL RIVER AT FRANKLIN, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	NITROGEN, NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	CARBON, INORGANIC, TOT IN BOT MAT (G/KG AS C)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (G/KG AS C)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)
OCT											
07...	1100	790	92	94	20	2	<1	<10	60	1	9
MAY											
19...	1330	--	--	--	<10	2	--	<10	20	<1	--

DATE	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)
OCT											
07...	10	3	40	6	0	220	15	2	20	80	7500
MAY											
19...	<10	--	--	<1	--	320	--	4	--	90	--

DATE	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	NICKEL, RECOV. FM BOTTOM MATERIAL (UG/G AS NI)	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	PHENOLS TOTAL (UG/L)	PCB, TOTAL IN BOTTOM MATERIAL (UG/KG)	PCN, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT											
07...	.1	<.01	3	10	<1	<1	40	1100	<1	3	<1.0
MAY											
19...	.2	--	1	--	<1	--	10	--	<1	--	--

DATE	ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDD, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIAZINON, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDOSULFAN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ETHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT											
07...	<.1	2.0	.8	<.1	<.1	<.1	<.1	<.1	<.1	<.1	<.1
MAY											
19...	--	--	--	--	--	--	--	--	--	--	--

DATE	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)	MALATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	METHOXYCHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARATHION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRITHION, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL IN BOTTOM MATERIAL (UG/KG)	PARATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	PERTHANE IN BOTTOM MATERIL (UG/KG)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)	TRITHION, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT											
07...	<.1	<.1	<.1	<.1	<.1	<.1	<.1	<.1	<1.00	<10	<.1
MAY											
19...	--	--	--	--	--	--	--	--	--	--	--

01367770 WALLKILL RIVER NEAR SUSSEX, NJ

LOCATION.--41°11'38", long 74°34'32", Sussex County, Hydrologic Unit 02020007, at bridge on Glenwood Road, 0.8 mi upstream of Papakating Creek, 1.7 mi southwest of Independence Corner, 2.0 mi southeast of Sussex, and 2.1 mi northwest of McAfee.

DRAINAGE AREA.--60.8 mi².

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976 to current year.

COOPERATION.--Field data and samples for laboratory analyses supplied by New Jersey Department of Environmental Protection, Division of Water Resources. Analyses of fecal coliform and fecal streptococci by the MPN method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)	HARD-NESS (MG/L AS CACO3)
JAN										
25...	1215	208	377	7.9	.0	13.6	E2.0	790	79	120
MAR										
29...	1045	--	275	8.2	6.5	8.9	<1.1	50	70	99
MAY										
19...	1200	102	401	8.1	12.5	10.2	E2.6	40	79	160
JUL										
21...	1030	26	550	8.2	22.0	8.7	E1.5	790	2400	230
AUG										
11...	1045	22	592	8.1	20.5	7.1	E2.1	790	540	250

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFIDE DISSOLVED (MG/L AS S)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
JAN									
25...	29	11	13	1.1	92	--	19	41	<.10
MAR									
29...	24	9.6	13	1.0	79	--	16	24	.10
MAY									
19...	38	16	14	.90	140	<.5	18	27	.10
JUL									
21...	51	24	16	1.9	203	--	24	36	.20
AUG									
11...	54	27	20	1.9	208	--	24	36	.20

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHATE, TOTAL (MG/L AS PO4)	CARBON, ORGANIC TOTAL (MG/L AS C)
JAN									
25...	6.6	190	<.010	.400	.120	<.01	--	.18	3.8
MAR									
29...	5.4	159	<.010	.400	.110	.28	.68	.06	3.8
MAY									
19...	<4.4	242	<.010	.600	.100	.42	1.0	.21	3.8
JUL									
21...	7.8	306	.030	1.10	.090	.52	1.6	.28	2.9
AUG									
11...	8.6	318	.020	1.20	.150	.98	2.2	.37	3.2

01367770 WALLKILL RIVER NEAR SUSSEX, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
MAY								
19...	1200	<10	2	<10	20	<1	<10	<1

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
MAY								
19...	350	3	80	.3	2	<1	20	<1

01367910 PAPAKATING CREEK AT SUSSEX, NJ

LOCATION.--41°12'02", long 74°35'59", Sussex County, Hydrologic Unit 02020007, at bridge on State Route 23 in Sussex, 0.7 mi downstream from Clove Brook, 2.6 mi southwest of Independence Corner, and 3.4 mi northwest of McAfee.

DRAINAGE AREA.--59.4 mi².

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976 to current year.

COOPERATION.--Field data and samples for Laboratory analyses supplied by New Jersey Department of Environmental Protection, Division of Water Resources. Analyses of fecal coliform and fecal streptococci by the MPN method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
JAN 25...	1045	378	243	7.3	.0	13.0	E2.3	330	220
MAR 29...	1200	612	183	7.8	6.0	7.9	<1.0	20	55
MAY 19...	1030	55	242	7.8	13.0	10.0	E1.9	140	11
JUL 21...	1200	24	325	7.8	23.5	5.3	E1.4	2200	350
AUG 11...	1130	23	327	7.5	21.5	4.7	3.7	3500	240

DATE	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
JAN 25...	63	20	3.2	12	2.2	30	23	28	<.10
MAR 29...	54	17	2.8	9.8	1.5	30	21	18	<.10
MAY 19...	78	25	3.7	9.9	1.4	55	21	19	.10
JUL 21...	120	40	5.5	12	2.1	87	27	24	.20
AUG 11...	120	38	5.3	14	2.3	81	25	24	.10

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHATE, TOTAL (MG/L AS PO4)	CARBON, ORGANIC TOTAL (MG/L AS C)
JAN 25...	6.0	135	.010	1.00	.170	.58	1.6	.31	4.8
MAR 29...	4.7	114	.010	1.00	.140	.39	1.4	.21	4.2
MAY 19...	3.9	151	.010	.800	.100	.30	1.1	.27	5.0
JUL 21...	4.7	186	.080	1.20	.160	.80	2.0	.61	4.3
AUG 11...	5.6	213	.110	1.00	.390	1.3	2.3	.58	4.3

01368950 BLACK CREEK NEAR VERNON, NJ

LOCATION.--Lat 41°13'21", long 74°28'33", Sussex County, Hydrologic Unit 02020007, at bridge on Maple Grange road, 0.6 mi upstream of confluence with Wawayanda Creek, 0.7 mi northwest of Maple Grange, and 1.7 mi northeast of Vernon.

DRAINAGE AREA.--17.3 mi².

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976 to current year.

COOPERATION.--Field data and samples for laboratory analyses supplied by New Jersey Department of Environmental Protection Division of Water Resources. Analyses of fecal coliform and fecal streptococci by the MPN method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, FECAL, EC BROTH (MPN)	STREPTOCOCCI FECAL (MPN)
OCT									
28...	1045	17	670	7.6	5.5	9.5	E1.9	40	14
FEB									
17...	1100	52	630	7.6	.5	9.6	E1.9	<20	6
MAY									
09...	1045	56	535	7.7	12.5	7.1	E1.8	130	33
JUL									
25...	1145	23	558	7.8	20.5	4.3	<.8	330	2400
AUG									
23...	1100	12	675	7.8	20.5	5.5	E1.6	3500	>2400

DATE	HARDNESS (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)
OCT									
28...	270	62	27	39	1.7	221	25	69	.20
FEB									
17...	220	51	23	31	1.4	180	24	54	.10
MAY									
09...	220	52	22	26	1.3	186	16	48	.10
JUL									
25...	230	54	23	34	2.4	180	31	58	.30
AUG									
23...	240	53	26	40	2.4	195	19	74	.20

DATE	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHATE, TOTAL (MG/L AS PO4)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT									
28...	7.4	430	.020	.100	.070	E.73	--	.18	5.4
FEB									
17...	8.3	326	.010	.700	.200	.41	1.1	.08	3.6
MAY									
09...	3.7	293	<.010	.400	.230	.5	.98	.15	6.7
JUL									
25...	10	336	.080	1.00	.190	E1.0	--	.95	7.6
AUG									
23...	7.0	376	.210	1.30	.420	1.1	2.5	.49	3.9

01376800 HACKENSACK RIVER AT WEST NYACK, NY

LOCATION.--Lat 41°05'44", long 73°57'52", Rockland County, NY, Hydrologic Unit 02030103, on right bank 20 ft downstream from Penn Central Transportation Company railroad bridge at West Nyack, 1,000 ft upstream from State Highway 59, and 1.0 mi downstream from DeForest Lake.

DRAINAGE AREA.--29.4 mi^2.

PERIOD OF RECORD.--December 1958 to current year.

GAGE.--Water-stage recorder and stop-log control. Datum of gage is 53.50 ft National Geodetic Vertical Datum of 1929 (levels by Hackensack Water Company).

REMARKS.--Records poor. Flow regulated by DeForest Lake (see Reservoirs in Hackensack River Basin). Diversion from gaging station pool for municipal supply for village of Nyack (see Diversions in Hackensack River Basin). Discharge given for this station represents the flow of Hackensack River downstream from this diversion.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,550 ft^3/s Feb. 3, 1973, gage height, 9.38 ft, from floodmarks, from rating curve extended above 840 ft^3/s; maximum gage height, 9.78 ft Apr. 10, 1980; minimum daily, 2.6 ft^3/s June 12, 1965, Sept. 25, 26, 30, 1966; minimum gage height, 1.70 ft Oct. 22, 1960.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 919 ft^3/s Apr. 16, gage height, 9.11 ft; minimum, 6.5 ft^3/s Oct. 6; minimum daily, 8.9 ft^3/s Oct. 6; minimum gage height, 2.59 ft June 29, 30, July 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.9	27	36	41	38	23	85	84	112	19	16	36
2	9.9	28	37	41	41	41	69	80	81	18	15	36
3	11	29	36	40	68	23	281	76	65	17	15	35
4	9.4	29	36	40	44	20	231	77	170	17	15	35
5	9.4	39	36	40	46	17	116	71	136	27	13	35
6	8.9	35	37	50	46	15	87	63	80	17	13	35
7	9.4	35	35	42	47	21	78	53	76	17	15	32
8	14	34	35	42	41	28	111	50	67	17	13	33
9	32	32	35	41	30	26	216	52	52	18	14	35
10	23	31	34	42	22	29	339	46	44	18	12	36
11	26	29	37	67	14	22	484	43	38	18	20	36
12	23	30	37	45	14	28	171	41	35	17	16	37
13	24	58	38	42	14	14	109	37	31	17	12	38
14	26	27	38	42	15	12	90	30	26	16	12	37
15	25	27	37	42	17	15	84	32	23	18	14	36
16	23	32	44	42	17	16	387	53	25	17	14	37
17	27	38	41	42	18	13	554	59	21	17	14	37
18	26	38	38	41	23	32	191	49	18	18	13	36
19	26	35	37	40	23	101	217	42	20	18	12	37
20	26	37	39	40	20	31	304	47	18	17	12	37
21	27	38	38	42	21	140	148	47	17	18	13	39
22	26	37	38	42	23	366	109	44	17	15	13	34
23	26	35	37	51	23	150	92	84	18	16	13	36
24	25	36	38	53	23	99	265	74	18	19	14	38
25	27	35	38	46	21	105	529	59	20	15	26	38
26	30	35	40	43	20	69	307	57	18	15	35	40
27	27	35	40	42	19	72	146	272	18	15	37	40
28	27	37	40	42	19	438	117	114	26	16	38	40
29	26	43	40	42	---	184	101	84	17	15	38	40
30	26	37	40	42	---	98	90	142	17	15	37	52
31	26	---	40	42	---	86	---	378	---	16	36	---
TOTAL	681.9	1038	1172	1349	767	2334	6108	2440	1324	533	580	1113
MEAN	22.0	34.6	37.8	43.5	27.4	75.3	204	78.7	44.1	17.2	18.7	37.1
MAX	32	58	44	67	68	438	554	378	170	27	38	52
MIN	8.9	27	34	40	14	12	69	30	17	15	12	32

CAL YR 1982 TOTAL 11606.9 MEAN 31.8 MAX 209 MIN 8.9
WTR YR 1983 TOTAL 19439.9 MEAN 53.3 MAX 554 MIN 8.9

01377000 HACKENSACK RIVER AT RIVERVALE, NJ

LOCATION.--Lat 40°59'55", long 73°59'27", Bergen County, Hydrologic Unit 02030103, on upstream right bank at bridge on Westwood Avenue in Rivervale, 1.5 mi upstream from Pascack Brook, 4.6 mi upstream from Oradell Dam, and 27.2 mi upstream from mouth.

DRAINAGE AREA.--58.0 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1941 to current year.

REVISED RECORDS.--WRD-NJ-80-1: 1968-79(M).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 22.51 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records good. Flow regulated by De Forest Lake and Lake Tappan (see Hackensack River Basin, reservoirs in). Diversions from De Forest Lake and West Nyack, NY, for municipal water supply (see Hackensack River Basin, diversions).

COOPERATION.--Gage-height record collected in cooperation with Hackensack Water Co.

AVERAGE DISCHARGE.--42 years, 88.8 ft³/s, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,160 ft³/s Sept. 27, 1975, gage height, 7.15 ft; no flow part of Jan. 16, 1970 and May 30, 1979.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,570 ft³/s Apr. 17, gage height, 5.63 ft; minimum, 12 ft³/s Feb. 11, gage height 1.48 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	98	84	36	66	34	37	132	140	437	34	142	90
2	98	86	36	64	28	65	113	134	185	33	127	94
3	96	86	36	63	62	37	355	127	129	31	111	113
4	96	67	36	61	33	34	555	126	218	29	115	113
5	95	66	36	67	29	31	288	121	254	33	138	111
6	94	56	47	79	29	30	176	111	182	55	137	120
7	96	55	69	59	29	38	135	100	117	40	136	133
8	97	55	90	59	29	53	170	90	108	31	133	131
9	98	54	88	58	29	43	459	88	90	27	132	128
10	94	54	88	58	27	39	568	80	76	25	131	130
11	93	54	86	79	24	33	1070	73	64	23	143	147
12	86	64	86	34	30	61	632	68	57	21	77	151
13	77	92	110	32	29	30	268	60	52	30	50	148
14	77	40	82	31	29	25	169	54	45	73	48	140
15	76	38	82	33	28	24	144	57	40	155	47	123
16	76	37	73	33	29	21	565	70	37	161	47	97
17	74	37	37	33	31	20	1340	90	33	158	79	85
18	82	37	47	34	35	39	766	80	31	158	117	81
19	91	37	61	31	35	131	462	70	31	158	116	75
20	90	46	66	33	33	34	655	77	33	158	114	68
21	89	64	80	34	34	145	407	81	34	155	113	63
22	88	69	78	33	36	46	244	77	33	71	112	75
23	88	79	78	53	36	30	184	137	29	41	112	50
24	87	92	77	49	36	27	348	127	27	47	110	50
25	86	100	76	40	34	26	1000	106	27	45	125	48
26	54	95	74	38	33	24	872	96	25	44	143	54
27	40	87	74	37	31	36	465	293	24	44	139	59
28	68	86	72	37	31	442	249	313	39	44	139	54
29	76	74	72	37	---	576	190	185	68	92	141	48
30	86	38	70	38	---	242	159	184	44	145	136	65
31	86	---	69	41	---	158	---	315	---	144	114	---
TOTAL	2632	1929	2112	1444	903	2577	13140	3730	2569	2305	3524	2844
MEAN	84.9	64.3	68.1	46.6	32.3	83.1	438	120	85.6	74.4	114	94.8
MAX	98	100	110	79	62	576	1340	315	437	161	143	151
MIN	40	37	36	31	24	20	113	54	24	21	47	48

CAL YR 1982 TOTAL 24962 MEAN 68.4 MAX 472 MIN 12
WTR YR 1983 TOTAL 39709 MEAN 109 MAX 1340 MIN 20

01377000 HACKENSACK RIVER AT RIVERVALE, NJ--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1962, 1964 to current year.

COOPERATION.--Analyses of fecal coliform and fecal streptococci by the MPN method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
JAN 19...	1200	40	410	7.8	.0	13.4	90	1.8	240	79
APR 13...	1200	262	277	7.9	11.0	11.8	105	3.6	--	--
JUN 06...	1100	182	269	7.8	19.5	7.8	85	2.3	330	50
JUL 21...	1200	142	289	8.0	27.0	7.7	96	--	--	>200
SEP 01...	1130	90	296	7.9	24.0	6.8	80	3.5	170	230

DATE	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFIDE TOTAL (MG/L AS S)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
JAN 19...	110	35	6.7	34	2.1	77	--	23	56	<.10
APR 13...	78	24	4.4	21	1.4	55	--	21	38	.10
JUN 06...	88	27	4.9	19	1.5	62	<.5	20	32	<.10
JUL 21...	93	29	5.0	18	1.7	72	--	19	34	.20
SEP 01...	95	29	5.6	21	2.0	69	--	18	35	.10

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHATE, TOTAL (MG/L AS PO4)	CARBON, ORGANIC TOTAL (MG/L AS C)
JAN 19...	4.3	210	.020	.700	.600	1.1	1.8	.18	5.0
APR 13...	2.4	167	.020	E.600	.110	.48	--	.18	6.0
JUN 06...	1.5	176	.030	.500	.110	.78	1.3	.39	5.6
JUL 21...	2.4	169	--	.200	--	--	--	.43	6.6
SEP 01...	4.1	157	.060	.400	.350	.87	1.3	7.67	5.4

01377000 HACKENSACK RIVER AT RIVERVALE, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
JUN								
06...	1100	10	1	10	80	1	10	5

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
JUN								
06...	430	1	160	<.1	3	<1	20	<1

01377500 PASCACK BROOK AT WESTWOOD, NJ

LOCATION.--Lat 40°59'33", long 74°01'19", Bergen County, Hydrologic Unit 02030103, on right bank 75 ft upstream from Harrington Avenue in Westwood, 500 ft downstream from Musquapsink Brook, and 2.3 mi upstream from mouth.

DRAINAGE AREA.--29.6 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1934 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 28.62 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records good. Flow regulated by Woodcliff Lake 3.0 mi above station (see Hackensack River Basin, reservoirs in). Water diverted for municipal supply by Spring Valley Water Co., by pumpage from well fields in headwater area of Pascack Brook in vicinity of Spring Valley, NY, and by Park Ridge Water Department by pumping from wells above Woodcliff Lake probably reduces flow past this station.

COOPERATION.--Gage-height record collected in cooperation with Hackensack Water Co.

AVERAGE DISCHARGE.--49 years, 55.0 ft³/s, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,440 ft³/s Sept. 12, 1971, gage height, 7.57 ft; minimum, 5.6 ft³/s June 29, 1965.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 400 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Mar. 19	0145	483	3.58	Apr. 8	2400	400	3.34
Mar. 21	1330	648	4.02	Apr. 10	1500	640	4.00
Mar. 27	2400	522	3.69	Apr. 16	1600	*663	4.06
Apr. 3	0945	518	3.68	Apr. 25	0845	486	3.59

Minimum discharge, 12 ft³/s Sept. 11, 12, 20, 21, gage height, 1.41 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	[illegible]	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28	20	40	27	40	63	52	91	185	45	25	28
2	28	20	39	25	42	81	92	90	113	35	32	26
3	28	19	36	24	77	56	367	92	81	34	25	18
4	26	19	35	24	49	56	222	96	250	33	24	17
5	23	39	34	28	45	57	88	65	147	34	24	16
6	23	31	37	57	45	55	75	64	70	37	27	15
7	23	27	34	37	45	68	73	63	93	47	25	53
8	23	21	32	33	45	85	161	62	90	54	23	63
9	24	21	30	29	43	59	227	61	80	38	23	14
10	22	23	30	30	42	63	339	60	60	37	22	13
11	22	23	29	80	37	145	328	59	77	30	85	13
12	22	23	30	40	43	157	247	54	76	32	161	15
13	23	90	29	39	46	94	102	50	74	29	38	37
14	22	47	28	36	45	65	83	49	83	31	26	19
15	21	41	29	35	46	44	78	53	74	32	23	17
16	21	38	53	38	46	44	419	120	50	31	19	15
17	20	37	42	34	49	42	360	78	58	28	17	15
18	21	35	36	30	53	104	283	50	82	27	22	14
19	21	34	33	27	51	383	292	49	79	33	22	13
20	20	31	31	27	49	279	296	51	120	39	18	13
21	20	30	31	27	50	403	100	51	154	65	16	24
22	20	30	29	28	53	295	92	52	91	115	14	54
23	21	31	27	67	59	225	170	166	37	43	15	32
24	21	30	29	57	57	58	266	67	36	52	14	23
25	24	29	29	43	56	55	382	45	35	48	13	20
26	43	27	29	41	54	56	309	62	35	39	13	19
27	33	27	28	40	51	106	150	276	34	33	13	17
28	28	28	28	39	52	360	100	98	87	24	15	20
29	25	59	28	37	---	222	115	104	138	20	61	22
30	21	42	27	39	---	56	82	154	90	17	31	91
31	20	---	27	42	---	53	---	249	---	28	29	---
TOTAL	737	972	999	1160	1370	3889	5950	2681	2679	1190	915	756
MEAN	23.8	32.4	32.2	37.4	48.9	125	198	86.5	89.3	38.4	29.5	25.2
MAX	43	90	53	80	77	403	419	276	250	115	161	91
MIN	20	19	27	24	37	42	52	45	34	17	13	13

CAL YR 1982 TOTAL 16141 MEAN 44.2 MAX 265 MIN 19
WTR YR 1983 TOTAL 23298 MEAN 63.8 MAX 419 MIN 13

01378500 HACKENSACK RIVER AT NEW MILFORD, NJ

LOCATION.--Lat 40°56'52", long 74°01'34", Bergen County, Hydrologic Unit 02030103, on right bank upstream from two masonry dams and two lift gates at pumping plant of Hackensack Water Co., New Milford, 4.0 mi downstream from Pascack Brook, and 21.8 mi upstream from mouth.

DRAINAGE AREA.--113 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1921 to current year. Monthly discharge only for October 1921, published in WSP 1302.

REVISED RECORDS: WSP 601: Drainage area. WSP 711: 1927-28(M). WRD-NJ 1970: 1969. WRD-NJ 1977: 1975(M).

GAGE.--Water-stage recorder above south dam. Datum of gage is 6.25 ft National Geodetic Vertical Datum of 1929. October 1921 to November 23, 1923, nonrecording gage and Nov. 23, 1923, to Sept. 25, 1934, water-stage recorder at same site at datum 0.05 ft lower.

REMARKS.--Water-discharge records fair except those below 1.0 ft³/s and those from Oct. 1 to Mar. 10-22, and June 14 to Sept. 30, which are poor. Records given herein do not include diversion at gage. Flow regulated by DeForest Lake, Lake Tappan, Woodcliff Lake 9.0 mi upstream from station, and Oradell Reservoir 0.6 mi upstream from station (see Hackensack River Basin, reservoirs in). Water diverted at gage, De Forest Lake, and West Nyack, NY, for municipal supply (see Hackensack River Basin, diversions).

COOPERATION.--Gage-height record collected in cooperation with Hackensack Water Co.

AVERAGE DISCHARGE.--62 years, 101 ft³/s, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,500 ft³/s Nov. 9, 1977, gage height, 7.95 ft, from high-water mark; no flow many days during most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,100 ft³/s Apr. 17, gage height, 5.53 ft; minimum daily discharge, 0.15 ft³/s Feb. 16, Mar. 16-17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.19	.20		.21	.17	.17	5.5	16	225	.55	.25	.49
2	.18	.18	.19	.20	.19	.17	42	11	73	.59	.50	.54
3	.20	.19	.21	.20	.20	.17	811	78	3.1	.55	.49	.50
4	.20	.19	.20	.19	.22	.17	439	119	288	.49	.53	.48
5	.19	.24	.18	.20	.20	.18	60	170	118	.58	.47	.58
6	.18	.20	.18	.17	.20	.17	39	.17	24	.51	.51	.53
7	.20	.21	.18	.20	.20	.17	13	.18	2.8	.49	.49	.54
8	.20	.20	.20	.19	.18	.18	254	.18	2.2	.58	.49	.49
9	.20	.18	.18	.19	.17	.16	624	.24	.89	.54	.58	.56
10	.19	.18	.20	.19	.19	.99	1090	.39	.42	.61	.60	.52
11	.18	.20	.21	.17	.17	34	1570	.36	.47	.56	.50	.67
12	.21	.18	.19	.17	.20	136	523	.32	.40	.57	.51	.50
13	.18	.19	.19	.16	.18	52	81	.26	.36	.46	.60	.58
14	.19	.18	.18	.20	.17	5.0	55	.30	.36	.46	.45	.44
15	.20	.21	.16	.21	.18	.31	81	.29	.57	.53	.54	.48
16	.20	.18	.18	.19	.15	.15	1500	25	.49	.50	.57	.49
17	.20	.17	.21	.17	.18	.15	2080	19	.56	.56	.51	.63
18	.18	.19	.20	.17	.18	13	671	5.8	.60	.61	.55	.57
19	.19	.17	.19	.19	.22	808	656	2.6	.55	.55	.52	.57
20	.19	.19	.21	.20	.20	96	675	5.3	.51	.55	.52	.56
21	.20	.17	.18	.20	.20	693	190	6.4	.52	.57	.48	.70
22	.18	.20	.18	.20	.18	110	74	6.1	.50	.62	.51	.63
23	.20	.20	.17	.17	.19	43	129	170	.47	.57	.54	.61
24	.18	.20	.21	.18	.19	2.2	816	9.4	.41	.54	.52	.56
25	.19	.19	.20	.17	.21	.50	1420	3.9	.49	.62	.54	.55
26	.18	.19	.19	.17	.20	.28	758	32	.53	.57	.40	.57
27	.19	.19	.16	.20	.19	150	255	304	.56	.57	.49	.52
28	.19	.20	.16	.18	.17	788	71	94	.61	.54	.58	.60
29	.20	.23	.18	.20	---	418	71	61	.52	.56	.48	.62
30	.18	.21	.19	.20	---	34	33	143	.60	.54	.55	.86
31	.19	---	.21	.18	---	14	---	276	---	.49	.46	---
TOTAL	5.93	5.81	5.87	5.82	5.28	3400.12	15086.5	1560.19	747.49	17.03	15.73	16.94
MEAN	.19	.19	.19	.19	.19	110	503	50.3	24.9	.55	.51	.56
MAX	.21	.24	.21	.21	.22	808	2080	304	288	.62	.60	.86
MIN	.18	.17	.16	.16	.15	.15	5.5	.17	.36	.46	.25	.44

CAL YR 1982 TOTAL 7441.09 MEAN 20.4 MAX 979 MIN .11
WTR YR 1983 TOTAL 20872.71 MEAN 57.2 MAX 2080 MIN .15

RESERVOIRS IN HACKENSACK RIVER BASIN, NJ

01376700 DE FOREST LAKE.--Lat 41°06'23", long 73°58'01, Rockland County, NY, Hydrologic Unit 02030103, at dam on Hackensack River, 0.85 mi north of West Nyack, NY. DRAINAGE AREA, 27.5 mi² revised. PERIOD OF RECORD, February 1956 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

Reservoir is formed by earthfill dam with sheet piling cutoff and concrete spillway; dam completed and storage began in February 1956. Total capacity at crest of dam 4,068,000,000 gal, elevation, 80.00 ft. Crest of dam topped by two 50-foot Bascule gates 5 ft high. Flow regulated by 12-inch Howell-Bunger valve at elevation, 59.25 ft and 24-inch Howell-Bunger valve at elevation, 61.25 ft. Reservoir used for storage and water released by Hackensack Water Co., for municipal water supply. Record of elevation and contents furnished by Hackensack Water Co.

01376950 LAKE TAPPAN.--Lat 41°01'05", long°00'05", Bergen County, Hydrologic Unit 02030103, at dam on Hackensack River, 0.50 mi north of Old Tappan. DRAINAGE AREA, about 49.0 mi². PERIOD OF RECORD, October 1966 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

Reservoir is formed by earthfill dam, completed in 1966. Capacity at spillway level, 3,378,000,000 gal, elevation, 55.00 ft. Flow regulated by four Bascule gates and one sluice gate. Water is released by Hackensack Water Co., for municipal water supply. Record of elevation and contents furnished by Hackensack Water Co.

01377450 WOODCLIFF LAKE.--Lat 41°01', long 74°03', Bergen County, Hydrologic Unit 02030103, at dam on Pascack Brook, 0.75 mi north of Hillsdale. DRAINAGE AREA, 19.4 mi². PERIOD OF RECORD, December 1929 to current year. Monthend contents only, prior to September 1953, published in WSP 1302, 1722. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

Reservoir is formed by earthfill dam, completed about 1905. Capacity at spillway level, 835,000,000 gal, elevation, 94.33 ft. Flow is regulated by flashboards and one 36-inch gate in center of dam. Water is released for diversion at New Milford by Hackensack Water Co., for municipal supply. Record of elevation and contents furnished by Hackensack Water Co.

01378480 ORADELL RESERVOIR.--Lat 40°57', long 74°02', Bergen County, Hydrologic Unit 02030103, at dam on Hackensack River at Oradell. DRAINAGE AREA, 113 mi². PERIOD OF RECORD, December 1922 to current year. Monthend contents only, prior to September 1953, published in WSP 1302, 1722. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

Reservoir is formed by hollow concrete dam, completed in 1922. Capacity at spillway level, 2,850,000,000 gal, elevation, 22.66 ft. Flow regulated by seven sluice gates (7 by 9 ft). Water is released for diversion by Hackensack Water Co., 1 mi downstream from dam for municipal supply. Record of elevation and contents furnished by Hackensack Water Co.

MONTHEND ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

Date	Elevation (feet)	Contents (million gallons)	Change in contents (equivalent in ft³/s)	Elevation (feet)	Contents (million gallons)	Change in contents (equivalent in ft³/s)	Elevation (feet)	Contents (million gallons)	Change in contents (equivalent in ft³/s)
	01376700	DE FOREST LAKE †		01376950	LAKE TAPPAN †		01377450	WOODCLIFF LAKE †	
Sept. 30	84.08	5,372	-	48.19	1,699	-	82.27	238	-
Oct. 31	82.31	4,816	-27.8	43.27	619	-53.9	77.69	116	-6.1
Nov. 30	81.32	4,514	-15.6	42.23	454	-8.5	78.41	132	+0.8
Dec. 31	79.28	3,904	-30.4	39.67	153	-15.0	76.47	90	-2.1
CAL YR 1982	-	-	+.1	-	-	-3.2	-	-	-1.1
Jan. 31	78.56	3,692	-10.6	43.91	732	+28.9	82.79	255	+8.2
Feb. 29	79.91	4,090	+22.0	46.85	1,359	+34.6	86.98	410	+8.6
Mar. 31	85.33	5,779	+84.3	55.32	3,968	+130.2	91.37	611	+10.0
Apr. 30	85.34	5,782	+.2	55.30	3,960	-.4	91.19	602	-.5
May 31	85.40	5,802	+1.0	55.48	4,026	+3.3	90.35	561	-2.0
June 30	84.80	5,604	-10.2	55.14	3,902	-6.4	76.38	89	-24.3
July 31	83.43	5,165	-21.9	52.31	2,925	-48.8	76.38	89	0
Aug. 31	81.43	4,547	-30.8	45.79	1,114	-90.4	76.50	91	+.1
Sept. 30	78.60	3,704	-43.5	38.44	65	-54.1	67.60	0	-4.7
WTR YR 1983	-	-	-7.1	-	-	-6.9	-	-	-1.0

Date	Elevation (feet)	Contents (million gallons)	Change in contents (equivalent in ft³/s)
	01378480	ORADELL RESERVOIR †	
Sept. 30	18.50	2,350	-
Oct. 31	18.01	2,239	-5.5
Nov. 30	17.37	2,097	-7.3
Dec. 31	16.54	1,916	-9.0
CAL YR 1982	-	-	-2.5
Jan. 31	18.73	2,403	+24.3
Feb. 29	20.90	2,919	+28.5
Mar. 31	23.50	3,600	+34.0
Apr. 30	23.58	3,622	+1.1
May 31	23.58	3,622	0
June 30	21.70	3,120	-25.9
July 31	18.18	2,278	-42.0
Aug. 31	18.49	2,348	+3.5
Sept. 30	17.07	2,031	-16.4
WTR YR 1983	-	-	-1.4

† Elevation at 0800 on first day of following month.

2

DIVERSIONS FROM HACKENSACK RIVER BASIN, NJ

01376272 Hackensack Water Co., diverts water from Sparkill Creek at foot of Danny Lane in Northvale, 300 ft south of New York-New Jersey state line and 0.6 mi upstream of Sparkill Brook. Water is diverted into Oradell Reservoir on the Hackensack River, for municipal supply. Records furnished by Hackensack Water Co.

01376699 Spring Valley Water Co., diverts water at De Forest Lake for municipal supply in Rockland County, NY. Records furnished by Spring Valley Water Co.

01376810 Village of Nyack, NY, diverts water from Hackensack River 100 ft downstream from gaging station on Hackensack River at West Nyack, NY (sta 01376800) for municipal supply. Records furnished by Board of Water Commissioners of Nyack, NY.

01378490 Hackensack Water Co., diverts water for municipal supply from Oradell Reservoir at Haworth pumping station 2.0 mi upstream from gaging station on Hackensack River at New Milford and from Hackensack River about 50 ft above gaging station on Hackensack River at New Milford, NJ (sta 01378500).

01378520 Hackensack Water Co., diverts water from Hirshfeld Brook, a tributary of the Hackensack River, below the gaging station on Hackensack River at New Milford, NJ, for municipal supply. Records furnished by Hackensack Water Co.

01391210 Hackensack Water Co., diverts water from Saddle River just north of bridge on State Route 4 at Arcola. Water is diverted into Oradell Reservoir on the Hackensack River, for municipalRecords furnished by Hackensack Water Co.

DIVERSIONS, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

Month	01376699 SPRING VALLEY WATER CO.	01376810 WEST NYACK, NY	01378490 HACKENSACK WATER CO.
October	10.7	2.16	129
November	5.98	2.02	126
December	6.07	1.94	126
CAL YR 1982	6.41	2.25	139
January	5.99	2.11	101
February	4.89	2.15	97.5
March	5.85	2.13	122
April	7.41	2.12	129
May	7.09	2.19	139
June	10.4	2.56	169
July	16.9	2.81	185
August	17.2	2.71	175
September	17.8	2.61	160
WTR YR 1983	9.72	2.29	138

Tabulation of diversion by pumpage from sources other than the Hackensack River into Oradell Reservoir. These figures are included in diversions from Hackensack River as noted above.

DIVERSIONS, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

Month	01376272 SPARKILL CREEK (HUDSON RIVER BASIN)	01378520 HIRSHFELD BROOK (HACKENSACK RIVER BASIN)	01391210 SADDLE RIVER (PASSAIC RIVER BASIN)	WELLS TO SURFACE SUPPLY
October	0	0.98	0.22	.84
November	.11	2.06	7.31	2.43
December	.03	1.92	11.3	2.69
CAL YR 1982	.08	.90	5.07	.95
January	.59	2.35	13.6	3.13
February	1.20	3.73	20.6	3.18
March	.38	1.30	5.46	.92
April	0	0	0	0
May	0	0	0	0
June	0	0	8.37	.15
July	.03	.43	9.07	.18
August	.11	2.48	4.45	.23
September	.005	1.89	3.48	2.89
WTR YR 1983	.20	1.41	6.99	1.37

01379000 PASSAIC RIVER NEAR MILLINGTON, NJ

LOCATION.--Lat 40°40'48", long 74°31'45", Somerset County, Hydrologic Unit 02030103, on right bank 200 ft downstream from Davis Bridge, 0.7 mi northwest of Millington, and 1.8 mi downstream from Black Brook.

DRAINAGE AREA.--55.4 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--November 1903 to June 1906 (published as "at Millington"), October 1921 to current year. Monthly discharge only for some periods published in WSP 1302.

REVISED RECORDS.--WSP 781: Drainage area. WSP 1552: 1905(M).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 215.60 ft National Geodetic Vertical Datum of 1929 (levels from New Jersey Geological Survey bench mark). Nov. 25, 1903 to July 15, 1906, nonrecording gage at bridge 0.8 mi downstream at different datum. Nov. 10, 1921 to Sept. 1, 1923, nonrecording gage at site 200 ft downstream at present datum. Oct. 31, 1923 to July 3, 1925, nonrecording gage and concrete control at present site and datum.

REMARKS.--Water-discharge records fair. Diversion from Osborn Pond by Commonwealth Water Co., Bernards Division, was discontinued in April 1979 and the installation dismantled.

AVERAGE DISCHARGE.--63 years (water years 1905, 1921-83) 90.0 ft^3/s, 22.05 in/yr, adjusted for diversion water years 1970-1979.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,000 ft^3/s Jan. 9, 1905, gage height, 7.8 ft from graph based on gage readings, site and datum then in use, from rating curve extended above 1,400 ft^3/s on basis of velocity-area study; maximum gage height, 9.73 ft Aug. 29, 1971; minimum discharge, 0.2 ft^3/s Sept. 12, 13, 1966, gage height, 3.76 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 22	0200	898	7.52	Apr. 11	0415	953	7.67
Mar. 28	1530	566	6.84	Apr. 17	0280	*1030	7.91
Apr. 3	2400	501	6.69	May 27	1530	598	6.90

Minimum discharge, 3.9 ft^3/s Sept. 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	18	85	22	104	119	187	144	292	70	14	8.9
2	15	17	108	23	114	229	153	123	220	76	14	8.2
3	11	17	96	25	217	240	316	106	170	63	12	8.0
4	9.3	17	79	22	238	186	444	103	173	49	11	7.6
5	8.5	38	68	25	171	147	345	98	170	41	12	7.5
6	8.2	61	60	95	149	126	259	88	137	39	13	6.7
7	8.1	25	56	97	93	122	194	80	116	28	13	6.3
8	8.5	21	47	76	90	159	210	74	98	23	11	6.2
9	8.7	20	41	64	81	281	443	72	81	25	9.7	5.3
10	8.1	20	30	61	74	320	598	65	71	24	8.8	4.9
11	7.6	18	24	286	46	451	922	59	58	21	12	4.8
12	7.9	18	23	311	28	480	779	55	49	18	52	4.9
13	7.9	74	20	241	31	429	572	49	44	16	38	8.6
14	10	125	17	182	35	284	347	47	41	15	18	8.1
15	10	72	17	117	37	183	235	47	39	15	22	7.2
16	9.3	68	45	84	45	155	573	54	36	15	19	6.6
17	9.3	61	108	87	58	121	994	80	34	14	14	6.6
18	9.2	50	72	53	78	132	887	68	32	13	12	6.7
19	9.2	42	62	40	110	590	695	55	47	14	12	6.3
20	9.2	36	52	28	131	644	536	68	144	22	11	6.0
21	9.4	33	53	25	139	691	409	89	103	16	10	6.8
22	9.6	31	45	24	158	836	292	139	72	17	9.1	22
23	9.4	30	42	45	188	654	227	235	63	14	8.6	16
24	8.7	26	47	132	196	457	235	235	54	15	7.7	12
25	11	24	49	159	191	286	421	191	46	19	7.2	10
26	31	23	47	178	166	200	412	187	39	17	6.8	9.6
27	31	22	44	156	137	186	323	516	36	14	6.9	9.2
28	23	21	41	119	130	494	242	484	44	12	7.6	9.1
29	21	73	40	90	---	477	193	420	131	12	11	8.8
30	20	117	37	79	---	368	166	435	88	12	9.8	10
31	19	---	33	91	---	254	---	388	---	14	9.4	---
TOTAL	386.1	1218	1588	3037	3235	10301	12609	4854	2728	763	422.6	249.1
MEAN	12.5	40.6	51.2	98.0	116	332	420	157	90.9	24.6	13.6	8.30
MAX	31	125	108	311	238	836	994	516	292	76	52	22
MIN	7.6	17	17	22	28	119	153	47	32	12	6.8	4.8
CFSM	.23	.73	.92	1.77	2.09	5.99	7.58	2.83	1.64	.44	.25	.15
IN.	.26	.82	1.07	2.04	2.17	6.92	8.47	3.26	1.83	.51	.28	.17

CAL YR 1982 TOTAL 31006.3 MEAN 84.9 MAX 894 MIN 5.6 CFSM 1.53 IN. 20.82
WTR YR 1983 TOTAL 41390.8 MEAN 113 MAX 994 MIN 4.8 CFSM 2.04 IN. 27.79

01379000 PASSAIC RIVER NEAR MILLINGTON, NJ--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1923-25, 1962 to current year.

COOPERATION.--Analyses of fecal coliform and fecal streptococci by the MPN method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
FEB										
01...	1030	95	205	7.4	.0	10.6	72	.7	540	79
APR										
05...	1045	353	121	7.4	9.5	9.1	79	2.1	70	20
MAY										
24...	1030	235	138	7.1	19.0	4.4	48	2.6	230	330
JUL										
14...	1100	15	198	7.3	24.5	4.0	48	1.3	330	>200
AUG										
24...	1030	7.8	223	7.6	22.5	4.6	52	1.5	350	50

DATE	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
FEB									
01...	58	14	5.7	16	1.1	30	23	23	<.10
APR									
05...	38	9.2	3.6	7.9	1.1	24	18	12	<.10
MAY									
24...	45	11	4.3	8.5	1.3	36	12	11	.10
JUL									
14...	65	16	6.2	13	.80	53	17	19	.20
AUG									
24...	80	20	7.2	14	1.1	65	15	21	.20

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180, DEG. C DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHATE, TOTAL (MG/L AS PO4)	CARBON, ORGANIC TOTAL (MG/L AS C)
FEB									
01...	10	125	<.010	.400	.070	.61	1.0	1.60	5.7
APR									
05...	4.3	78	<.010	.200	.050	.48	.68	.21	7.4
MAY									
24...	7.7	93	.030	.200	.110	E.65	--	.73	9.7
JUL									
14...	15	127	.010	.200	.090	.65	.85	.58	9.8
AUG									
24...	16	139	.010	E.300	<.050	.54	--	.46	6.8

01379500 PASSAIC RIVER NEAR CHATHAM, NJ

LOCATION.--Lat 40°43'31", long 74°23'23", Morris County, Hydrologic Unit 02030103, on left bank 150 ft downstream from Stanley Avenue bridge in Chatham, and 3.0 mi upstream from Canoe Brook.

DRAINAGE AREA.--100 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February 1903 to December 1911, October 1937 to current year. Monthly discharge only for some periods, published in WSP 1302.

GAGE.--Water-stage recorder. Concrete control since Sept. 19, 1938. Datum of gage is 193.51 ft National Geodetic Vertical Datum of 1929. Prior to Dec. 31, 1911, nonrecording gage at bridge 150 ft upstream at different datum.

REMARKS.--Water-discharge records good except those for period of no gage-height record, Oct. 21 to Dec. 8 and June 9 to July 1, which are poor. Diversion from Osborn Pond by Commonwealth Water Co., Bernards Division, during water years 1903-79.

AVERAGE DISCHARGE.--54 years (water years 1904-11, 1938-83), 170 ft³/s, 23.09 in/yr, adjusted for diversion water years 1970-79.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,380 ft³/s Aug. 2, 1973, gage height, 9.36 ft, from floodmark; minimum, 2.0 ft³/s many days in May and June 1903, August and October 1905, September and October 1906, and September 11, 1944.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 800 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Mar. 18	2200	1060	5.80	Apr. 10	1345	1320	6.24
Mar. 21	1315	*1380	6.34	Apr. 17	2215	1260	6.14
Mar. 27	2315	983	5.66	May 30	1630	823	5.40
Apr. 3	0900	830	5.41				

Minimum discharge, 10 ft³/s Sept. 11, 12, gage height, 3.14 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35	34	171	49	209	233	425	228	591	89	34	19
2	31	31	184	41	218	486	290	195	474	91	46	18
3	27	32	174	42	442	481	572	165	334	87	31	17
4	24	60	140	40	465	385	682	165	361	72	25	15
5	22	85	120	50	366	276	647	153	307	61	24	14
6	21	71	100	206	244	214	531	133	232	55	25	14
7	20	73	82	204	165	231	414	118	187	46	24	15
8	20	46	70	142	174	331	419	107	152	40	23	15
9	21	36	68	110	151	505	601	102	135	36	23	14
10	19	34	60	116	136	641	942	97	125	37	22	13
11	18	33	50	543	248	632	1100	88	107	35	54	11
12	17	56	46	547	157	719	1110	81	90	32	103	19
13	19	200	39	471	152	645	985	76	80	31	88	35
14	22	228	40	349	120	559	822	68	74	29	53	23
15	20	145	37	238	101	431	625	69	70	28	34	17
16	20	91	96	162	98	299	916	87	66	26	37	15
17	18	80	188	178	120	216	1200	136	63	22	33	14
18	18	71	148	197	170	371	1220	116	60	22	29	13
19	20	56	104	173	232	799	1120	90	88	61	25	13
20	21	53	91	143	255	826	1020	108	280	72	22	13
21	22	43	87	64	261	1010	874	149	195	43	19	28
22	22	47	82	52	314	1060	705	212	133	42	18	72
23	21	47	71	124	407	1020	535	473	114	28	18	49
24	20	47	77	329	428	885	498	497	98	37	16	31
25	60	47	81	365	395	713	641	398	84	42	16	20
26	125	47	76	352	335	527	672	316	74	37	15	18
27	80	47	72	303	253	437	601	630	68	31	14	17
28	56	73	67	226	224	751	497	753	80	27	20	17
29	45	178	65	175	---	788	384	721	250	25	35	16
30	42	214	61	147	---	696	282	733	150	26	26	42
31	38	---	56	179	---	561	---	689	---	38	23	---
TOTAL	964	2305	2809	6317	6840	17728	21330	7953	5122	1348	975	637
MEAN	31.1	76.8	90.6	204	244	572	711	257	171	43.5	31.5	21.2
MAX	125	228	188	547	465	1060	1220	753	591	91	103	72
MIN	17	31	37	40	98	214	282	68	60	22	14	11
CFSM	.31	.77	.91	2.04	2.44	5.72	7.11	2.57	1.71	.43	.31	.21
IN.	.36	.86	1.04	2.35	2.54	6.59	7.93	2.96	1.91	.50	.36	.24

CAL YR 1982 TOTAL 52550 MEAN 144 MAX 1110 MIN 16 CFSM 1.44 IN. 19.55
WTR YR 1983 TOTAL 74328 MEAN 204 MAX 1220 MIN 11 CFSM 2.04 IN. 27.65

01379500 PASSAIC RIVER NEAR CHATHAM, NJ--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1962 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: October 1966 to September 1968.
SUSPENDED-SEDIMENT DISCHARGE: July 1963 to September 1968.

COOPERATION.--Analyses of fecal coliform and fecal streptococci by the MPN method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, FECAL, EC BROTH (MPN)	STREPTOCOCCI FECAL (MPN)
FEB										
01...	1345	207	268	7.8	2.0	12.0	86	1.7	240	48
APR										
05...	1330	640	177	7.4	10.0	9.5	84	2.0	490	170
MAY										
24...	1330	495	174	7.3	18.5	6.0	64	7.2	3300	2300
JUL										
14...	1345	29	547	7.9	27.5	6.8	86	4.5	500	50
AUG										
24...	1300	16	617	7.8	25.0	5.4	64	9.0	130	110

DATE	HARDNESS (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	SULFIDE TOTAL (MG/L AS S)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)
FEB										
01...	70	17	6.6	23	1.1	35	--	27	33	<.10
APR										
05...	42	10	4.1	16	1.1	25	--	21	25	<.10
MAY										
24...	48	12	4.5	14	1.5	32	<.5	19	19	<.10
JUL										
14...	100	26	9.1	62	2.6	68	--	35	99	.30
AUG										
24...	120	32	9.8	73	3.5	76	--	57	98	.30

DATE	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHATE, TOTAL (MG/L AS PO4)	CARBON, ORGANIC TOTAL (MG/L AS C)
FEB									
01...	13	150	.020	.800	.430	1.0	1.8	.70	6.1
APR									
05...	7.7	107	.020	.400	.140	.82	1.1	.44	7.2
MAY									
24...	10	114	.040	.600	.600	1.6	2.2	.82	9.2
JUL									
14...	15	320	.360	2.30	.180	1.3	3.6	2.15	10
AUG									
24...	15	365	.560	E2.70	1.00	1.8	--	1.90	6.8

01379500 PASSAIC RIVER NEAR CHATHAM, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
MAY								
24...	1330	70	1	<10	80	1	20	8

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
MAY								
24...	1600	11	90	<.1	12	<1	20	<1

01379773 GREEN POND BROOK AT PICATINNY ARSENAL, NJ

LOCATION.--Lat 40°57'34", long 74°32'24", Morris County, Hydrologic Unit 02030103, on left bank at Picatinny Arsenal, 500 ft upstream from Picatinny Lake, and 0.55 mi downstream from Burnt Meadow Brook.

DRAINAGE AREA.--7.65 mi².

WATER-DISCHARGE RECORD

PERIOD OF RECORD.--October 1982 to September 1983.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 730 ft, from topographic map.

REMARKS.--Water-discharge records good except those for period of no gage-height record Oct. 1 to Nov. 13, which are fair. Some regulation by Lake Denmark and Green Pond.

EXTREMES FOR PERIOD OCTOBER TO SEPTEMBER.--Peak discharges above base of 75 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Mar. 19	0815	125	2.72	Apr. 16	1700	*142	2.81
Mar. 21	1315	132	2.76	Apr. 20	1730	85	2.48
Mar. 27	2300	88	2.50	Apr. 25	0800	85	2.48
Apr. 10	1315	75	2.41				

Minimum discharge, 1.9 ft³/s Aug. 6, 7, gage height, 1.35 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.4	2.3	4.1	13	16	18	44	36	36	6.8	3.4	3.1
2	5.7	2.3	4.1	13	18	24	40	30	30	6.3	3.5	2.9
3	4.9	2.5	4.0	12	32	25	52	27	26	6.0	3.3	2.9
4	4.6	2.9	4.0	12	29	25	51	27	36	5.3	3.0	2.8
5	4.6	5.8	3.9	12	27	20	47	25	31	4.8	2.3	2.7
6	4.2	4.7	4.7	13	25	18	41	22	29	4.5	2.2	2.6
7	4.0	3.6	4.4	12	25	21	35	20	30	4.1	2.5	2.5
8	5.2	3.4	3.9	12	26	23	39	19	25	4.0	2.9	2.5
9	4.0	3.0	3.8	12	23	28	49	18	21	3.9	2.7	2.4
10	3.5	2.8	3.6	13	21	38	62	16	17	3.8	2.7	2.4
11	3.2	2.7	3.6	27	19	49	69	13	15	3.6	5.7	2.3
12	3.1	2.9	3.5	25	20	53	62	9.8	13	3.5	8.1	2.4
13	3.1	8.2	3.3	23	20	45	58	9.3	11	3.4	5.6	2.5
14	3.1	5.6	3.1	20	21	37	54	8.8	9.4	3.3	4.4	2.4
15	3.1	5.1	3.2	18	20	33	46	9.5	8.2	3.5	4.4	2.3
16	3.2	4.6	8.8	17	19	29	110	15	9.1	3.4	4.3	2.2
17	3.3	4.3	9.0	16	19	25	132	16	11	3.2	4.0	2.1
18	3.2	4.1	7.8	15	19	31	108	15	8.4	3.1	4.2	2.3
19	3.0	3.9	7.6	15	19	108	93	14	7.4	4.4	4.0	2.4
20	2.9	3.8	7.7	14	18	98	85	15	6.9	4.7	3.8	2.3
21	3.0	3.7	9.9	13	18	113	75	15	6.8	4.0	3.5	3.5
22	2.9	3.6	11	13	18	108	68	15	6.3	5.5	3.3	4.8
23	2.7	3.6	13	16	19	88	61	22	5.8	4.0	3.2	3.2
24	2.6	3.5	14	19	19	72	66	20	5.5	4.1	3.1	2.9
25	3.0	3.4	13	18	18	60	83	18	5.0	4.3	3.0	2.7
26	3.8	3.3	13	17	18	49	79	20	4.8	3.7	3.1	2.5
27	2.8	3.2	13	17	17	48	68	30	4.5	3.3	3.1	2.3
28	2.5	3.2	13	17	17	74	57	27	6.9	3.2	3.1	2.2
29	2.4	6.2	13	16	---	67	48	28	11	3.1	3.2	2.2
30	2.4	4.6	13	16	---	58	42	38	7.9	3.1	3.3	2.7
31	---	---	13	16	---	50	---	40	---	3.3	3.2	---
TOTAL	108.7	116.8	236.9	492	580	1535	1924	638.4	444.9	127.2	112.1	79.0
MEAN	3.51	3.89	7.64	15.9	20.7	49.5	64.1	20.6	14.8	4.10	3.62	2.63
MAX	6.4	8.2	14	27	32	113	132	40	36	6.8	8.1	4.8
MIN	2.3	2.3	3.1	12	16	18	35	8.8	4.5	3.1	2.2	2.1
CFSM	.46	.51	1.00	2.08	2.71	6.47	8.38	2.69	1.93	.54	.47	.34
IN.	.53	.57	1.15	2.39	2.82	7.46	9.36	3.10	2.16	.62	.55	.38

WTR YR 1983 TOTAL 6395.0 MEAN 17.5 MAX 132 MIN 2.1 CFSM 2.29 IN. 31.10

01379790 GREEN POND BROOK AT WHARTON, NJ

LOCATION.--Lat 40°54'55", long 74°34'55", Morris County, Hydrologic Unit 02030103, on left bank 600 ft upstream from bridge on State Route 15, 0.2 mi northwest of Wharton, and 1.7 mi upstream from mouth.

DRAINAGE AREA.--12.6 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1982 to September 1983.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 710 ft, from topographic map.

REMARKS.--Water-discharge records good except those for period of no gage-height record,Oct. 1 to Nov. 14, which are fair. Some regulation from Lake Picatinny.

EXTREMES FOR PERIOD OCTOBER TO SEPTEMBER.--Peak discharges above base of 130 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Mar. 19	1000	354	4.11	Apr. 10	1445	162	3.69
Mar. 21	1600	278	3.99	Apr. 16	1815	*445	4.23
Mar. 28	0015	192	3.80	Apr. 21	1600	133	3.57
Apr. 3	0945	133	3.57	Apr. 25	0800	142	3.61

Minimum discharge, 2.4 ft³/s Sept. 29, gage height, 2.28 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.6	4.8	10	17	29	31	70	66	62	12	6.1	6.1
2	6.8	5.0	10	17	37	49	62	59	52	11	6.5	5.5
3	6.3	5.2	9.6	17	68	41	103	49	44	9.9	6.2	5.4
4	6.2	6.0	9.5	17	55	38	86	29	73	9.2	5.9	5.4
5	6.2	7.2	9.5	18	46	36	76	24	55	8.7	5.8	5.4
6	6.2	6.8	11	22	43	32	69	30	47	8.4	5.8	5.5
7	6.2	6.2	9.4	19	44	38	61	32	53	7.7	5.7	5.8
8	6.2	5.8	8.8	19	40	43	71	32	42	7.6	5.7	5.7
9	6.2	5.5	8.4	18	37	52	88	32	34	7.3	5.6	5.4
10	6.2	5.2	7.9	21	34	72	120	27	29	7.0	5.4	5.1
11	6.1	4.9	8.1	58	30	80	121	24	26	7.0	19	5.0
12	6.1	5.3	7.8	36	37	91	100	22	20	6.9	28	5.1
13	6.5	6.0	7.4	34	32	78	88	17	20	6.9	14	5.4
14	6.8	7.4	7.1	30	32	67	84	14	18	6.7	8.7	4.3
15	6.5	6.4	7.0	31	31	58	75	16	16	6.6	7.5	4.0
16	6.4	5.5	28	30	31	51	284	33	14	6.9	8.7	4.0
17	5.9	6.3	14	29	31	45	289	39	15	6.5	7.4	3.9
18	5.8	11	11	27	33	68	178	28	14	6.3	7.2	3.9
19	6.2	10	13	25	33	288	144	25	14	11	7.1	4.0
20	6.1	9.4	21	25	31	199	138	27	13	9.6	6.4	3.9
21	6.1	9.3	19	24	33	204	127	26	13	7.5	6.0	4.8
22	6.0	9.1	17	23	36	182	111	26	12	8.2	6.0	9.2
23	5.8	8.8	17	34	38	134	100	44	11	6.9	5.9	4.1
24	5.8	8.4	19	36	38	109	111	34	9.7	7.4	5.9	3.8
25	6.0	7.7	19	33	36	92	134	29	8.8	7.7	6.0	3.5
26	6.4	7.5	19	30	33	78	117	40	8.4	6.6	5.7	3.5
27	6.2	7.2	18	29	30	82	103	69	8.4	6.5	5.5	3.4
28	6.0	7.3	18	28	30	151	91	47	17	6.2	5.4	3.5
29	5.4	20	20	27	---	107	80	48	20	6.0	6.6	3.1
30	5.0	11	18	27	---	89	74	81	14	6.2	6.5	4.3
31	4.9	---	17	29	---	80	---	76	---	6.8	5.8	---
TOTAL	190.1	226.2	419.5	830	1028	2765	3355	1145	783.3	239.2	238.0	142.0
MEAN	6.13	7.54	13.5	26.8	36.7	89.2	112	36.9	26.1	7.72	7.68	4.73
MAX	7.6	20	28	58	68	288	289	81	73	12	28	9.2
MIN	4.9	4.8	7.0	17	29	31	61	14	8.4	6.0	5.4	3.1
CFSM	.49	.60	1.07	2.13	2.91	7.08	8.89	2.93	2.07	.61	.61	.38
IN.	.56	.67	1.24	2.45	3.04	8.16	9.91	3.38	2.31	.71	.70	.42

WTR YR 1983 TOTAL 11361.3 MEAN 31.1 MAX 289 MIN 3.1 CFSM 2.47 IN. 33.54

01380500 ROCKAWAY RIVER ABOVE RESERVOIR, AT BOONTON, NJ

LOCATION.--Lat 40°54'06", long 74°24'40", Morris County, Hydrologic Unit 02030103, on right bank at Morris Avenue in Boonton, 1.8 mi upstream from dam at Boonton Reservoir.

DRAINAGE AREA.--116 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1937 to current year. Monthly discharge only for October 1937, published in WSP 1302.

REVISED RECORDS.--WRD-N 1938(m). WDR NJ-78-1: 1949(m), 1952(m), 1968(m), 1971(m), 1973(p), 1974(m), 1977(m).

GAGE.--Water-stage recorder, crest-stage gage, and concrete control. Datum of gage is 364.47 ft National Geodetic Vertical Datum of 1929 (levels from New Jersey Geological Survey bench mark).

REMARKS.--Water-discharge records good. Flow regulated by Splitrock Reservoir 14.5 mi above station (see Passaic River Basin, reservoirs in). Town of Boonton diverts water for municipal supply from Taylortown Reservoir on Stony Brook, capacity, 75,000,000 gal and by pumping from wells in vicinity of Boonton. The mean diversion during the water year from Taylortown Reservoir was 0.37 ft³/s. Rockaway Valley trunk sewer bypasses the station (see station 01381000).

COOPERATION.--Gage-height record collected in cooperation with Jersey City, Bureau of Water.

AVERAGE DISCHARGE.--46 years, 224 ft³/s, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,430 ft³/s Jan. 25, 1979, gage height, 7.06 ft; minimum daily, 10 ft³/s Aug. 10, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 950 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Mar. 19	1630	2230	5.48	Apr. 16	2230	*3030	6.11
Mar. 22	0145	1800	5.03	Apr. 25	1400	1360	4.50
Mar. 28	1130	1450	4.62	May 27	0745	1260	4.35
Apr. 11	0030	1640	4.83				

Minimum discharge, 30 ft³/s Sept. 4, 5, 18, gage height, 1.84 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	95	54	190	124	237	275	572	547	580	138	73	47
2	84	55	173	120	248	506	510	501	476	120	78	41
3	70	57	164	116	645	475	910	467	405	100	67	36
4	66	58	156	107	575	382	1070	449	595	87	60	31
5	62	217	149	109	424	351	763	397	559	84	56	34
6	58	155	152	196	378	332	624	361	443	78	55	45
7	58	135	147	166	349	390	548	332	441	71	52	41
8	78	122	133	144	362	463	582	314	412	64	47	37
9	55	119	130	130	300	618	997	329	356	61	42	36
10	49	113	114	135	261	671	1070	277	296	53	42	35
11	46	105	108	711	214	794	1420	248	253	50	85	33
12	43	115	112	517	173	825	1030	233	215	50	514	34
13	50	392	98	345	262	722	834	217	193	47	325	55
14	59	332	89	283	291	592	693	201	173	45	144	39
15	55	238	92	278	289	528	605	199	159	44	98	35
16	53	210	242	288	275	474	1480	296	157	50	81	34
17	51	195	300	244	275	434	2410	437	178	42	69	33
18	47	194	196	213	300	463	1610	308	166	38	63	31
19	43	185	170	210	307	1790	1230	248	194	75	62	33
20	43	175	168	207	278	1690	1150	281	251	156	57	33
21	46	163	159	175	267	1420	1100	265	176	86	51	47
22	44	166	146	182	298	1590	971	248	156	133	46	232
23	41	165	139	279	348	1130	850	531	135	80	43	73
24	38	158	151	450	364	901	896	400	119	84	40	52
25	47	147	157	405	337	761	1290	284	105	115	38	58
26	150	138	156	336	305	635	1130	307	90	79	38	81
27	99	136	144	288	268	584	915	1040	82	62	37	74
28	75	145	143	259	257	1270	794	632	160	56	36	66
29	64	316	147	237	---	1060	688	493	443	50	70	60
30	59	279	140	233	---	811	616	633	205	51	56	80
31	55	---	129	259	---	651	---	738	---	125	45	---
TOTAL	1883	5039	4694	7746	8887	23588	29358	12213	8173	2374	2570	1566
MEAN	60.7	168	151	250	317	761	979	394	272	76.6	82.9	52.2
MAX	150	392	300	711	645	1790	2410	1040	595	156	514	232
MIN	38	54	89	107	173	275	510	199	82	38	36	31

CAL YR 1982 TOTAL 78282 MEAN 214 MAX 1520 MIN 38
WTR YR 1983 TOTAL 108091 MEAN 296 MAX 2410 MIN 31

01381000 ROCKAWAY RIVER BELOW RESERVOIR, AT BOONTON, NJ

LOCATION.--Lat 40°53'47", long 74°23'36", Morris County, Hydrologic Unit 02030103, on right bank 2,000 ft downstream from Boonton Reservoir Dam at Boonton.

DRAINAGE AREA.--119 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March to December 1903; January, February 1904 (gage height only); January 1906 to September 1950 (monthly discharge only, published in WSP 1302) October 1950 to current year (figures of daily discharge for October 1950 to September 1954 published in Special Report 16 of New Jersey Department of Environmental Protection). Published as "near Boonton" 1903-4, and as "at Boonton" 1906-37.

REVISED RECORDS.--WSP 1902: 1951-54. WDR NJ-79-1: 1949(M), 1952(M), 1968(M), 1970-74(M), 1977(M).

GAGE.--Water-stage recorder. Concrete control since Nov. 5, 1936. Datum of gage is 195.68 ft National Geodetic Vertical Datum of 1929 (levels from New Jersey Geological Survey bench mark). Mar. 15, 1903 to Feb. 2, 1904, nonrecording gage at site 1.9 mi downstream at different datum. Jan. 1, 1906 to Mar. 3, 1918, nonrecording gage on Boonton Dam 2,000 ft upstream at datum 305.25 ft National Geodetic Vertical Datum of 1929 (levels from New Jersey Geological Survey bench mark).

REMARKS.--Water-discharge records fair. Records represent flow in river only. Sewage effluent enters river about 600 ft below station (records given herein). Flow regulated by Boonton Reservoir (see Passaic River Basin, reservoirs in) 2,000 ft above station, and by Splitrock Reservoir (see Passaic River Basin, reservoirs in) 16.5 mi above station. Water diverted from Boonton Reservoir for municipal supply of Jersey City (see Passaic River Basin, diversions).

COOPERATION.--Gage-height record collected in cooperation with and record of sewage effluent funished by Jersey City, Bureau of Water.

AVERAGE DISCHARGE.--77 years (water years 1907-83), 136 ft³/s, adjusted for sewage effluent since October 1930.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 7,560 ft³/s, Oct. 10, 1903; no flow for many days in some years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,940 ft³/s Apr. 17, gage height, 6.77 ft; minimum, 7.5 ft³/s Nov. 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.6	8.4	9.0	35	114	145	495	495	519	85	10	10
2	9.6	8.4	18	30	116	289	432	442	402	56	9.8	10
3	9.6	8.6	45	26	385	357	685	391	316	34	9.7	10
4	9.6	8.8	62	18	494	280	1110	360	423	24	9.8	10
5	9.6	9.2	52	16	351	233	741	318	486	12	9.6	10
6	9.6	8.5	60	67	275	210	559	269	366	10	9.6	10
7	9.6	8.2	51	84	244	236	477	245	326	10	9.6	10
8	9.6	8.1	39	61	240	310	488	229	297	10	9.7	10
9	9.6	8.6	32	43	189	436	838	228	268	10	9.8	10
10	9.6	8.8	21	45	150	466	994	201	205	10	9.7	10
11	9.6	8.9	16	424	141	594	1570	169	169	10	12	10
12	9.6	8.9	14	486	99	611	1100	150	140	10	10	10
13	9.4	10	11	285	124	540	808	137	109	10	10	9.9
14	8.7	8.9	17	185	177	407	639	128	86	10	10	9.8
15	8.5	8.9	8.6	169	174	362	544	125	70	10	10	9.8
16	8.5	9.1	38	173	156	343	1180	70	59	10	10	10
17	8.5	9.2	200	133	149	318	2730	9.6	78	10	10	9.9
18	8.5	9.1	144	100	160	315	1950	9.7	81	10	10	9.6
19	8.5	9.0	93	71	174	1130	1420	62	88	11	10	9.7
20	8.5	9.0	83	55	162	1850	1220	161	150	10	10	9.6
21	8.4	9.1	72	58	151	1610	1160	185	111	10	10	12
22	8.6	9.0	54	58	160	1810	1010	179	82	9.8	10	9.9
23	8.5	8.9	47	97	191	1260	842	371	60	9.8	10	9.7
24	8.5	8.9	53	265	218	870	828	347	39	10	10	9.6
25	8.9	8.9	60	293	215	665	1280	221	25	10	10	9.6
26	9.1	9.0	67	220	190	534	1250	218	19	10	10	9.6
27	8.5	8.9	56	166	155	483	979	874	15	10	10	9.6
28	8.6	8.9	60	128	137	1100	788	655	29	10	10	9.6
29	8.5	9.8	48	107	---	1140	651	421	262	9.8	10	10
30	8.5	8.9	46	100	---	777	558	493	175	9.9	10	11
31	8.5	---	38	110	---	587	---	615	---	10	10	---
TOTAL	278.9	266.9	1614.6	4108	5491	20268	29326	8778.3	5455	471.3	309.3	298.9
MEAN	9.00	8.90	52.1	133	196	654	978	283	182	15.2	9.98	9.96
MAX	9.6	10	200	486	494	1850	2730	874	519	85	12	12
MIN	8.4	8.1	8.6	16	99	145	432	9.6	15	9.8	9.6	9.6
(†)	9.7	9.6	9.6	9.4	11.4	17.0	20.1	13.8	12.5	10.1	9.9	10.7

CAL YR 1982 TOTAL 40463.8 MEAN 111 MAX 1210 MIN 8.1 † 10.6
WTR YR 1983 TOTAL 76666.2 MEAN 210 MAX 2730 MIN 8.1 † 12.0

† Sewage effluent, in cubic feet per second, from plant of Rockaway Valley Regional Sewerage Authority.

01381200 ROCKAWAY RIVER AT PINE BROOK, NJ

LOCATION.--Lat 40°51'29", long 74°20'53", Morris County, Hydrologic Unit 02030103, at bridge on U.S. Route 46 at intersection with New Road in Pine Brook, and 1.1 mi upstream of mouth.

DRAINAGE AREA.--136 mi².

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1963 to current year.

COOPERATION.--Analyses of fecal coliform and fecal streptococci by the MPN method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, FECAL, EC BROTH (MPN)	STREPTOCOCCI FECAL (MPN)
OCT 05...	1230	E36	460	7.7	17.5	4.9	51	5.4	800	<200
JAN 31...	1230	E140	241	7.5	3.0	13.0	96	1.1	26	2
APR 06...	1300	E700	158	7.5	8.0	11.9	99	3.3	20	8
MAY 25...	1330	E320	193	7.7	17.5	8.6	90	1.7	80	20
JUL 19...	1300	E59	433	7.7	23.0	3.4	40	13	200	2400
AUG 25...	1300	E29	454	7.7	22.0	5.0	56	5.1	230	20
SEP 29...	1330	E25	471	7.8	16.5	5.6	56	3.7	200	1300

DATE	HARDNESS (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	SULFIDE TOTAL (MG/L AS S)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)
OCT 05...	130	32	11	31	4.8	71	<.5	28	48	.20
JAN 31...	70	18	6.2	18	1.4	43	--	19	33	.10
APR 06...	44	11	3.9	12	1.0	25	--	16	22	.10
MAY 25...	55	14	4.9	13	1.1	36	--	18	24	<.10
JUL 19...	120	30	11	38	4.6	73	--	30	49	.20
AUG 25...	130	32	11	32	9.4	78	--	36	50	.20
SEP 29...	130	34	12	38	4.9	79	--	31	53	.30

DATE	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHATE, TOTAL (MG/L AS PO4)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 05...	14	265	.400	1.50	4.40	5.7	7.2	2.30	4.7
JAN 31...	8.7	141	E.020	.600	.710	1.1	1.8	.55	3.6
APR 06...	7.3	--	.010	.400	.210	.51	.91	.24	3.8
MAY 25...	7.0	152	.050	.500	.310	.73	1.1	.36	4.0
JUL 19...	13	247	.640	2.50	E2.90	3.1	5.6	3.37	6.5
AUG 25...	13	265	.800	3.30	2.40	2.7	6.0	2.60	4.0
SEP 29...	14	267	.520	2.60	.120	5.1	7.7	2.70	4.6

01381200 ROCKAWAY RIVER AT PINE BROOK, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	NITROGEN,NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	CARBON, INORGANIC, TOT IN BOT MAT (G/KG AS C)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (G/KG AS C)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)
OCT											
05...	1230	870	<.1	13	30	1	<1	<10	150	2	<1

DATE	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)
OCT											
05...	10	4	10	12	0	480	1500	6	20	180	130

DATE	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY RECOV. FM BOTTOMCMATERIAL (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	NICKEL, RECOV. FM BOTTOM MATERIAL (UG/G AS NI)	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	PHENOLS TOTAL (UG/L)	PCB, TOTAL IN BOTTOM MATERIAL (UG/KG)	PCN, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT											
05...	.1	<.01	4	<10	<1	<1	30	60	2	2	<1.0

DATE	ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDD, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIAZINON, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDOSULFAN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ETHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT											
05...	<.1	<1.0	.5	.3	.4	<.1	.2	<.1	<.1	<.1	<.1

DATE	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)	MALATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	METHOXYCHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARATHION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRITHION, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL IN BOTTOM MATERIAL (UG/KG)	PARATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	PERTHANE IN BOTTOM MATERIL (UG/KG)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)	TRITHION, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT											
05...	<.1	<.1	<.1	<.1	<.1	<.1	<.1	<.1	<1.00	<10	<.1

01381500 WHIPPANY RIVER AT MORRISTOWN, NJ

LOCATION.--Lat 40°48'21", long 74°27'22", Morris County, Hydrologic Unit 02030103, on left bank at Morristown sewage-disposal plant, 0.8 mi downstream from Morristown, and 9.0 mi upstream from mouth.

DRAINAGE AREA.--29.4 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1921 to current year.

REVISED RECORDS.--WSP 781: Drainage area. WSP 1552: 1922-23(M), 1924, 1925-27(M) 1928-29, 1930-32(M), 1933-34. WRD-NJ 1974: 1965.

GAGE.--Water-stage recorder and crest-stage gage. Concrete control since July 1, 1936. Datum of gage is 260.01 ft National Geodetic Vertical Datum of 1929 (levels from New Jersey Geological Survey bench mark). Prior to July 16, 1930, nonrecording gage at same site and datum.

REMARKS.--Water-discharge records good. Flow occasionally regulated by operation of gates in Pocahontas Dam, 2.5 mi above station.

AVERAGE DISCHARGE.--62 years, 68.2 ft^3/s 24.11 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,280 ft^3/s Aug. 28, 1971, gage height, 7.60 ft; minimum, 2.8 ft^3/s Aug. 27, 1932, gage height, 0.73 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 450 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 11	0030	469	3.82	May 22	2330	489	3.88
Mar. 18	2215	748	4.55	May 26	1845	955	5.06
Mar. 21	1300	507	3.93	June 4	1800	518	3.96
Mar. 27	2230	500	3.91	June 28	1815	500	3.91
Apr. 3	0845	476	3.84	July 30	1900	592	4.16
Apr. 10	1230	713	4.46	Aug. 11	1900	1150	5.54
Apr. 16	1845	*1250	5.78	Sept. 21	2100	472	3.83
May 21	1815	600	4.18				

Minimum discharge, 13 ft^3/s many days in October and September.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	16	35	17	40	60	98	107	102	35	37	17
2	16	16	35	17	47	133	91	100	93	34	36	17
3	15	16	26	17	163	73	351	95	86	31	33	16
4	15	21	24	17	74	55	213	104	191	30	32	16
5	15	84	22	28	46	52	125	88	142	30	32	16
6	15	26	26	59	40	48	111	79	89	30	22	16
7	15	20	22	36	45	69	105	74	82	27	18	15
8	15	18	20	22	43	126	203	72	73	26	17	15
9	15	18	18	20	38	150	313	72	66	26	17	15
10	15	17	17	51	34	191	461	65	62	25	16	15
11	15	17	18	294	30	153	365	62	59	25	144	14
12	15	17	18	68	56	145	205	60	56	26	212	22
13	17	121	17	36	45	94	168	58	53	30	52	26
14	18	46	17	30	37	81	148	56	51	29	25	17
15	16	29	18	33	38	77	136	62	49	34	22	16
16	15	22	84	33	42	70	737	90	46	26	26	15
17	14	20	58	28	48	66	484	106	45	20	26	15
18	14	19	29	25	59	182	253	60	44	20	26	15
19	15	18	25	24	61	569	232	55	48	58	26	14
20	15	18	25	23	53	204	263	87	65	49	25	14
21	15	18	23	23	53	328	236	133	48	28	23	60
22	15	18	21	23	69	296	186	131	42	35	17	87
23	14	18	21	72	81	159	154	213	38	21	17	19
24	14	17	27	104	75	135	237	88	35	39	17	16
25	29	16	23	66	63	119	323	64	33	34	17	15
26	73	16	22	49	54	105	191	20	32	23	16	15
27	26	16	20	39	46	151	150	487	32	21	16	15
28	18	18	20	34	46	366	137	155	118	20	27	15
29	17	90	20	32	---	154	125	146	133	19	32	15
30	16	39	18	34	---	113	117	195	46	59	19	33
31	16	---	17	41	---	104	---	134	---	54	18	---
TOTAL	560	845	786	1395	1526	4628	6918	3518	2059	964	1063	616
MEAN	18.1	28.2	25.4	45.0	54.5	149	231	113	68.6	31.1	34.3	20.5
MAX	73	121	84	294	163	569	737	487	191	59	212	87
MIN	14	16	17	17	30	48	91	55	32	19	16	14
CFSM	.62	.96	.86	1.53	1.85	5.07	7.86	3.84	2.33	1.06	1.17	.70
IN.	.71	1.07	.99	1.77	1.93	5.86	8.75	4.45	2.61	1.22	1.35	.78

CAL YR 1982 TOTAL 17970 MEAN 49.2 MAX 557 MIN 14 CFSM 1.67 IN. 22.74
WTR YR 1983 TOTAL 24878 MEAN 68.2 MAX 737 MIN 14 CFSM 2.32 IN. 31.48

01381500 WHIPPANY RIVER AT MORRISTOWN, NJ--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1923-24, 1926, 1962 to current year.

COOPERATION.--Analyses of fecal coliform and fecal streptococci by the MPN method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, FECAL, EC BROTH (MPN)	STREPTOCOCCI FECAL (MPN)
FEB 02...	1100	36	299	7.5	3.0	13.2	98	1.8	500	210
APR 04...	1200	189	151	7.4	8.0	11.8	100	2.4	>2400	>2400
MAY 23...	1100	255	136	7.3	15.5	9.1	91	6.3	13000	7900
JUL 18...	1200	21	309	8.3	27.0	10.8	135	2.1	800	200
AUG 18...	1100	25	301	8.4	23.0	11.2	131	2.4	2300	<200
SEP 27...	1100	15	358	8.5	17.5	14.6	151	1.5	490	230

DATE	HARDNESS (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	SULFIDE TOTAL (MG/L AS S)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)
FEB 02...	83	21	7.3	23	2.1	48	--	20	40	<.10
APR 04...	48	12	4.3	11	1.1	26	--	16	19	<.10
MAY 23...	45	12	3.7	8.1	1.5	29	<.5	11	12	<.10
JUL 18...	100	26	9.0	20	2.6	66	--	23	37	<.10
AUG 18...	97	25	8.5	20	2.9	62	--	19	35	<.10
SEP 27...	120	30	10	23	3.1	78	--	26	43	.10

DATE	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	ITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHATE, TOTAL (MG/L AS PO4)	CARBON, ORGANIC TOTAL (MG/L AS C)
FEB 02...	16	189	.020	1.50	.570	1.1	2.7	1.20	3.5
APR 04...	12	103	.020	.780	E.110	.56	1.3	.40	4.1
MAY 23...	11	82	.030	E.700	.290	E1.0	--	.52	5.9
JUL 18...	16	206	.070	1.40	<.050	.59	2.0	--	4.3
AUG 18...	17	215	.150	1.70	.160	.46	2.2	--	3.3
SEP 27...	17	216	.120	2.20	.120	.60	2.8	--	3.0

01381500 WHIPPANY RIVER AT MORRISTOWN, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	NITROGEN,NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	CARBON, INORGANIC, TOT IN BOT MAT (G/KG AS C)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (G/KG AS C)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L) AS CD)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G) AS CD)
MAY											
23...	1100	--	--	--	<10	1	--	<10	40	1	--
SEP											
27...	1100	310	1.0	5.0	--	--	<1	--	--	--	<1

DATE	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)
MAY											
23...	<10	--	--	9	--	1900	--	16	--	110	--
SEP											
27...	--	4	<10	--	10	--	4100	--	90	--	190

DATE	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	NICKEL, RECOV. FM BOTTOM MATERIAL (UG/G AS NI)	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G) N)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G '(UG/L)	PHENOLS TOTAL (UG/KG)	PCB, TOTAL IN BOTTOM MATERIAL (UG/KG)	PCN, TOTAL IN BOTTOM MATERIAL
MAY											
23...	<.1	--	9	--	<1	--	40	--	<1	--	--
SEP											
27...	--	.35	--	<10	--	<1	--	60	--	270	<1.0

DATE	ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDD, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIAZINON, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDOSULFAN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ETHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)
MAY											
23...	--	--	--	--	--	--	--	--	--	--	--
SEP											
27...	<.1	21	7.4	1.5	40	<.1	<.1	<.1	<.1	<.1	<.1

DATE	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)	MALATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	METHOXYCHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARATHION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRITHION, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL IN BOTTOM MATERIAL (UG/KG)	PARATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	PERTHANE IN BOTTOM MATERIL (UG/KG)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)	TRITHION, TOTAL IN BOTTOM MATERIAL (UG/KG)
MAY											
23...	--	--	--	--	--	--	--	--	--	--	--
SEP											
27...	.3	<.1	<.1	<.1	<.1	<.1	<.1	<.1	<1.00	<10	<.1

01381800 WHIPPANY RIVER NEAR PINE BROOK, NJ

LOCATION.--Lat 40°50'42", long 74°20'51", Morris County, Hydrologic Unit 02030103, at bridge on New Road, 0.3 mi southwest of overpass of Interstate 280, 0.4 mi upstream of Rockaway River, and 1.4 mi southwest of Pine Brook.

DRAINAGE AREA.--68.5 mi².

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1963 to current year.

COOPERATION.--Analyses of fecal coliform and fecal streptococci by the MPN method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, FECAL, EC BROTH (MPN)	STREPTOCOCCI FECAL (MPN)
OCT										
05...	1030	32	480	7.6	15.5	5.5	55	12	800	500
JAN										
31...	1030	98	430	7.0	3.0	11.0	81	4.7	180	330
APR										
06...	1045	--	198	7.3	10.0	7.8	68	2.4	46	13
MAY										
25...	1030	--	223	7.2	17.5	4.6	--	--	230	200
JUL										
19...	1100	40	433	7.7	25.0	4.4	53	4.9	500	<200
AUG										
25...	1100	33	470	8.0	21.5	5.4	60	5.2	230	230
SEP										
29...	1030	30	466	7.8	15.0	6.8	66	4.9	330	170

DATE	HARDNESS (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	SULFIDE TOTAL (MG/L AS S)	SULFATE DISSOLVED (MG/L AS SO4)	CHLIRIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)
OCT										
05...	150	38	13	30	4.5	94	<.5	40	45	.10
JAN										
31...	120	31	9.8	33	2.5	67	--	37	59	.10
APR										
06...	64	17	5.3	14	1.5	41	--	23	22	<.10
MAY										
25...	72	19	5.9	13	1.8	55	--	16	22	<.10
JUL										
19...	150	36	14	31	3.4	95	--	35	45	.10
AUG										
25...	160	41	14	30	3.1	102	--	41	48	.10
SEP										
29...	150	38	14	34	4.0	97	<.5	43	50	.20

DATE	SILICA, DISSOLVED (MG/L AS SIO2)	SOLID, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHATE, TOTAL (MG/L AS PO4)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT									
05...	17	303	.300	1.70	2.30	3.7	5.4	2.70	4.8
JAN									
31...	15	264	E.030	1.40	1.90	2.0	3.4	1.30	6.9
APR									
06...	6.7	129	.020	.500	.290	.90	1.4	.39	7.1
MAY									
25...	9.3	151	.050	.700	.310	.37	1.1	.76	9.3
JUL									
19...	18	281	.330	2.00	1.20	2.3	4.3	1.96	5.4
AUG									
25...	17	284	.380	2.50	1.00	1.8	4.3	2.24	5.4
SEP									
29...	18	279	.302	2.40	1.70	2.2	4.6	2.64	6.3

01381800 WHIPPANY RIVER NEAR PINE BROOK, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	NITROGEN,NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	CARBON, INORGANIC, TOT IN BOT MAT (G/KG AS C)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (G/KG AS C)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)
OCT 05...	1030	830	<.1	8.6	20	2	<1	<10	140	1	1
SEP 29...	1030	--	--	--	20	3	--	<10	130	1	--

DATE	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)
OCT 05...	10	8	10	12	20	900	6000	8	70	130	100
SEP 29...	10	--	--	7	--	480	--	8	--	80	--

DATE	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY RECOV. FM BOTTOMCMATERIAL (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	NICKEL, RECOV. FM BOTTOM MATERIAL (UG/G AS NI)	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	PHENOLS TOTAL (UG/L)	PCB, TOTAL IN BOTTOM MATERIAL (UG/KG)	PCN, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 05...	.2	<.01	3	<10	<1	<1	20	60	1	50	<1.0
SEP 29...	<.1	--	4	--	<1	--	30	--	<1	--	--

DATE	ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDD, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIAZINON, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDOSULFAN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ETHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 05...	<.1	9.0	5.8	1.9	1.1	<.1	.6	<.1	<.1	<.1	<.1
SEP 29...	--	--	--	--	--	--	--	--	--	--	--

DATE	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)	MALATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	METHOXYCHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARATHION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRITHION, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL IN BOTTOM MATERIAL (UG/KG)	PARATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	PERTHANE IN BOTTOM MATERIL (UG/KG)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)	TRITHION, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 05...	<.1	<.1	<.1	<.1	<.1	<.1	<.1	<.1	<1.00	<10	<.1
SEP 29...	--	--	--	--	--	--	--	--	--	--	--

01381900 PASSAIC RIVER AT PINE BROOK, NJ

LOCATION.--Lat 40°51'45", long 74°19'18", Morris County, Hydrologic Unit 02030103, on downstream left wingwall of bridge on U.S. Route 46, 0.5 mi east of Pine Brook, and 1.3 mi downstream from Rockaway River.

DRAINAGE AREA.--349 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1963-69, 1973, and annual maximum, water years 1966-75, 1978-79. October 1979 to current year. Feb. 19 to Aug. 24, 1939 in files of U.S. Army Corps of Engineers, New York District.

REVISED RECORDS.--WDR NJ-77-1: 1967(M).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 149.26 ft National Geodetic Vertical Datum of 1929. December 1965 to September 1979, crest-stage gage at same site at datum 10.00 ft higher. Feb. 19 to Aug. 24, 1939, water-stage recorder at present NJ Route 506 bridge, 1,600 ft upstream from gage, operated by U.S. Army Corps of Engineers, New York District at datum 13.05 ft higher.

REMARKS.--Water-discharge records fair. No gage-height record Oct. 30 to Dec. 1. Flow regulated by Boonton and Splitrock Reservoirs (see Passaic River Basin, reservoirs in) and many small lakes. Water diverted from Boonton Reservoir for municipal supply of Jersey City (see Passaic River Basin, diversions).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,530 ft³/s Apr. 18, 1983, gage height, 20.23 ft; maximum gage height, 21.84 ft Sept. 12, 1971, present datum; minimum discharge observed, 70 ft³/s Sept. 29, 1980, gage height, 10.15 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1810, according to State Geologist in 1904, 23.2 ft Oct. 10, 1903, present datum, from King Survey of highwater marks at present NJ Route 506 bridge, 1,600 ft upstream from gage. Floods of Mar. 13, 1936 and Sept. 24, 1938 reached stages of 20.8 ft and 19.4 ft respectively, at present NJ Route 506 bridge and present datum. Flood of July 23, 1945 reached a stage of 22.3 ft at present site and datum according to U.S. Army Corps of Engineers; minimum observed, 41.1 ft³/s Sept. 22, 1964.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,000 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Mar. 13	0715	2110	18.01	Apr. 12	0415	3650	19.23
Mar. 22	1930	4730	19.86	Apr. 18	0800	*5530	20.23
Mar. 29	1645	2690	18.57	Apr. 26	1015	2890	18.72
Apr. 5	0300	2350	18.26	June 1	0100	2040	17.90

Minimum discharge, 82 ft³/s Sept. 5, gage height, 10.29 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	149	116	410	190	498	599	1980	1700	2010	585	164	115
2	134	110	371	174	486	981	1770	1530	1880	363	152	106
3	119	108	354	161	849	1210	1760	1380	1690	280	142	98
4	112	105	332	154	1180	1270	2130	1240	1580	236	123	89
5	110	380	311	149	1290	1200	2330	1120	1570	210	116	85
6	107	430	303	421	1200	1070	2150	954	1520	192	113	87
7	106	330	294	495	985	957	1940	787	1370	176	102	90
8	107	220	243	394	790	994	1800	665	1200	163	100	93
9	106	160	209	307	701	1240	1940	612	1000	152	103	94
10	104	145	177	276	693	1500	2320	571	781	139	100	92
11	98	138	159	995	693	1820	3300	513	584	135	142	88
12	99	130	146	1370	652	2030	3590	463	477	141	602	91
13	101	590	139	1490	598	2100	3250	425	404	144	550	157
14	120	800	138	1400	594	2010	2790	398	352	137	361	126
15	117	600	142	1210	550	1830	2380	387	312	131	199	105
16	108	430	235	944	477	1640	2650	435	283	141	152	95
17	105	300	560	670	456	1460	4580	509	279	123	146	91
18	101	270	546	450	552	1320	5480	422	278	113	142	89
19	101	240	408	300	684	1800	5070	340	289	140	157	89
20	100	220	333	260	704	2900	4600	440	721	278	132	93
21	96	212	305	251	680	3800	4060	574	754	210	120	101
22	95	202	274	249	742	4590	3440	728	585	278	110	371
23	91	191	245	370	877	4560	2830	1050	405	180	109	255
24	93	180	249	809	983	3890	2490	1270	305	145	108	153
25	106	165	268	1020	1030	3110	2650	1310	252	194	105	121
26	458	145	268	1060	1000	2480	2870	1200	206	165	104	110
27	412	140	254	959	877	2070	2720	1440	185	139	100	105
28	179	138	242	772	702	2220	2400	1860	263	124	98	101
29	160	350	242	571	---	2610	2100	1940	792	119	204	97
30	140	450	224	452	---	2560	1890	1930	844	117	149	163
31	120	---	207	474	---	2250	---	2000	---	200	121	---
TOTAL	4154	7995	8588	18797	21523	64071	85260	30193	23171	5850	5126	3550
MEAN	134	267	277	606	769	2067	2842	974	772	189	165	118
MAX	458	800	560	1490	1290	4590	5480	2000	2010	585	602	371
MIN	91	105	138	149	456	599	1760	340	185	113	98	85

CAL YR 1982 TOTAL 184809 MEAN 506 MAX 3080 MIN 91
WTR YR 1983 TOTAL 278278 MEAN 762 MAX 5480 MIN 85

01382000 PASSAIC RIVER AT TWO BRIDGES, NJ

LOCATION.--Lat 40°53'40", long 74°16'23", Passaic County, Hydrologic Unit 02030103, at bridge on Two Bridges Road in Two Bridges, 50 ft upstream from Pompton River.

DRAINAGE AREA.--361 mi^2.

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1962 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: June 1969 to September 1974.
pH: June 1969 to September 1974.
WATER TEMPERATURES: October 1962 to September 1974.
DISSOLVED OXYGEN: June 1969 to September 1974.

COOPERATION.--Analyses of fecal coliform and fecal streptococci by the MPN method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)	HARD-NESS (MG/L AS CACO3)
OCT 13...	1100	700	7.0	15.0	3.2	32	4.3	>2400	33	150
FEB 17...	1100	500	7.3	1.5	10.6	75	2.2	80	<2	75
APR 14...	1315	141	7.4	10.0	8.1	71	1.4	20	20	42
JUN 07...	1300	208	7.3	21.0	4.2	47	2.5	130	170	70
JUL 28...	1315	569	7.9	25.5	5.2	63	6.0	<200	<200	130
AUG 29...	1300	580	7.8	25.5	4.4	54	6.9	50	<20	160

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFIDE TOTAL (MG/L AS S)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 13...	39	13	68	5.4	82	--	42	95	.20
FEB 17...	20	6.1	49	2.2	50	--	35	74	.10
APR 14...	11	3.6	10	1.3	27	--	17	16	<.10
JUN 07...	18	6.0	15	1.7	44	<.5	20	23	.10
JUL 28...	32	11	56	3.8	80	--	43	87	.20
AUG 29...	40	14	46	6.3	89	--	53	67	.20

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHATE, TOTAL (MG/L AS PO4)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 13...	17	375	E.420	2.00	3.10	6.3	8.3	.09	4.7
FEB 17...	8.9	263	.030	1.10	E2.20	E2.2	--	1.50	5.0
APR 14...	5.0	84	.020	.500	.120	.55	1.1	.36	5.9
JUN 07...	10	141	.070	.800	.290	2.0	2.8	1.04	8.5
JUL 28...	15	318	.290	2.40	1.90	E2.1	--	1.93	8.0
AUG 29...	17	336	.490	E4.10	3.80	4.4	--	3.37	7.5

01382000 PASSAIC RIVER AT TWO BRIDGES, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYL-LIUM, TOTAL RECOV-ERABLE (UG/L AS BE)	BORON, TOTAL RECOV-ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)
OCT								
13...	1100	30	2	<10	220	<1	10	23
JUN								
07...	1300	<10	2	<10	80	1	20	8

DATE	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	SELE-NIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
OCT								
13...	830	7	120	.2	4	<1	20	1
JUN								
07...	1100	4	120	<.1	5	<1	20	2

01382500 PEQUANNOCK RIVER AT MACOPIN INTAKE DAM, NJ

LOCATION.--Lat 41°01'00", long 74°23'47", Morris County, Hydrologic Unit 02030103, on left bank at Macopin intake dam of Newark water-works, 0.4 mi downstream from Macopin River, and 3.0 mi northwest of Butler.

DRAINAGE AREA.--63.7 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1898 to current year. Monthly discharge only for some periods, published in WSP 1302. Records for January 1892 to December 1897, published in WSP 541, have been found to be unreliable and should not be used.

GAGE.--Water-stage recorder above dam. Datum of gage is 570.00 ft National Geodetic Vertical Datum of 1929 (levels by New Jersey Geological Survey). Prior to May 22, 1970, at datum 13.55 ft higher.

REMARKS.--Water-discharge records fair except those below 10 ft^3/s, which are poor. Records given herein represent flow over intake dam only. Flow regulated by Canistear, Oak Ridge, Clinton, Charlotteburg Reservoirs, and Echo Lake (see Passaic River Basin, reservoirs in). Water diverted at Charlotteburg Reservoir for municipal supply of city of Newark (see Passaic River Basin, diversions).

COOPERATION.--Gage-height record collected in cooperation with the Department of Public Affairs, Division of Water Supply, city of Newark. Prior to May 22, 1970, discharge figures furnished by city of Newark.

AVERAGE DISCHARGE.--85 years, 50.9 ft^3/s, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 6,100 ft^3/s Oct. 10, 1903, gage height, 17.4 ft present datum; no flow over dam during several months of most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,850 ft^3/s Mar. 19, gage height, 15.37 ft); no flow part of Oct. 17, 21, Sept. 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.8	2.3	8.5	9.7	13	12	228	241	213	8.3	8.8	3.2
2	4.4	3.2	8.3	8.5	24	30	206	204	137	6.3	7.0	4.4
3	3.2	3.2	8.3	10	101	28	423	170	89	5.7	4.7	4.0
4	2.6	4.3	7.8	8.4	76	23	445	165	223	5.0	4.6	4.2
5	2.2	14	8.3	7.8	51	22	321	134	253	4.6	4.6	4.6
6	1.9	12	8.1	14	36	19	257	92	158	4.5	3.9	4.0
7	2.5	9.3	8.5	13	35	25	216	62	279	4.0	4.6	2.3
8	3.2	5.5	8.3	13	27	35	269	44	270	2.7	5.3	1.2
9	3.6	4.8	7.8	11	22	46	369	65	156	2.4	4.6	2.1
10	3.8	4.9	5.1	13	21	52	526	41	88	3.3	6.3	1.4
11	1.8	3.8	4.6	68	24	56	642	24	55	2.8	8.8	.81
12	1.3	3.4	6.0	45	45	62	493	19	34	2.1	12	1.1
13	1.4	17	5.7	30	31	44	359	17	23	1.7	12	1.5
14	2.1	14	3.3	20	44	33	291	16	19	2.6	10	1.1
15	1.4	12	3.2	19	24	26	246	17	17	2.0	8.3	.98
16	1.1	9.0	13	18	16	23	1010	28	17	1.5	6.9	.92
17	1.2	7.3	17	14	15	23	1380	40	19	1.7	5.5	1.3
18	.91	6.3	13	15	16	127	867	62	20	1.3	5.1	1.3
19	.55	6.3	11	30	13	1430	655	37	18	12	6.2	.98
20	.57	6.3	11	19	12	1210	598	31	16	4.0	4.9	.57
21	.45	6.3	10	10	11	946	524	26	16	16	4.5	2.8
22	1.0	6.3	11	8.7	12	878	503	25	14	45	1.6	1.3
23	.73	6.3	11	19	14	624	457	85	12	23	2.0	.35
24	.57	5.6	11	24	13	450	558	98	10	15	1.7	.24
25	1.2	4.3	12	22	13	363	898	52	8.7	12	2.5	.37
26	4.2	3.2	13	19	13	285	799	40	5.6	7.9	.60	.28
27	2.0	4.7	11	16	11	280	566	201	4.0	5.9	1.2	.55
28	1.7	3.4	11	14	11	697	431	237	10	4.6	2.2	1.6
29	1.9	10	11	13	---	578	348	182	12	3.8	3.5	.24
30	2.1	11	11	13	---	413	286	277	9.7	5.2	3.2	.88
31	2.1	---	11	13	---	325	---	281	---	11	3.2	---
TOTAL	61.48	210.0	289.8	558.1	744	9165	15171	3013	2206.0	227.9	160.30	50.57
MEAN	1.98	7.00	9.35	18.0	26.6	296	506	97.2	73.5	7.35	5.17	1.69
MAX	4.4	17	17	68	101	1430	1380	281	279	45	12	4.6
MIN	.45	2.3	3.2	7.8	11	12	206	16	4.0	1.3	.60	.24

CAL YR 1982 TOTAL 6439.78 MEAN 17.6 MAX 472 MIN .45
WTR YR 1983 TOTAL 31857.15 MEAN 87.3 MAX 1430 MIN .24

01383500 WANAQUE RIVER AT AWOSTING, NJ

LOCATION.--Lat 41°09'31", long 74°20'00", Passaic County, Hydrologic Unit 02030103, on right bank 700 ft downstream from dam at outlet of Greenwood Lake at Awosting.

DRAINAGE AREA.--27.1 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1919 to current year. Prior to October 1940, published as "at Greenwood Lake".

REVISED RECORDS.--WSP 781: Drainage area. WSP 1552: 1922(M), 1928(M), 1936. WDR NJ-79-1: 1933(M), 1936(M), 1945(M), 1948(P), 1951(P), 1952(P), 1953(M), 1955(P), 1956(M), 1957(M), 1958(M), 1960(P), 1961(M), 1968(P), 1969(P). WDR NJ-80-1: 1960(P).

GAGE.--Water-stage recorder. Concrete control since Oct. 31, 1938. Datum of gage is 601.32 ft National Geodetic Vertical Datum of 1929 (levels from New Jersey Geological Survey bench mark). Prior to Apr. 1, 1926, nonrecording gage and Apr. 1, 1926, to Oct. 31, 1938, water-stage recorder at site 100 ft upstream at same datum.

REMARKS.--Water-discharge records good except those below 10 ft^3/s, which are fair. Flow completely regulated by Greenwood Lake (see Passaic River Basin, reservoirs in).

COOPERATION.--Gage-height record collected in cooperation with North Jersey District Water Supply Commission.

AVERAGE DISCHARGE.--64 years, 53.9 ft^3/s, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,160 ft^3/s Mar. 22, 1980, gage height, 6.26 ft, from rating curve extended above 750 ft^3/s based on theoretical weir formula; no flow at times when gates at Greenwood Lake were closed and water below the spillway.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 200 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 4	0345	222	3.13	Apr. 4	0015	200	3.06
Mar. 12	1215	276	3.28	Apr. 11	1030	398	3.56
Mar. 20	0345	695	4.25	Apr. 17	0430	*808	4.29
Mar. 29	0700	296	3.33	Apr. 25	2330	475	3.71

Minimum dishcarge, 2.0 ft^3/s Sept. 11, gage height, 1.43 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	4.9	34	28	62	62	159	139	92	17	10	6.2
2	9.9	5.0	33	28	67	92	129	117	83	17	9.9	6.2
3	7.4	5.3	31	27	187	112	165	105	70	17	8.7	6.1
4	7.3	6.4	32	24	217	110	196	101	101	15	8.7	6.0
5	6.4	38	32	24	191	108	177	89	112	16	8.7	6.1
6	6.2	41	32	34	156	101	149	78	98	14	8.7	6.2
7	6.0	34	32	31	155	115	130	66	126	9.7	8.7	6.2
8	5.7	27	29	32	139	135	135	63	122	7.1	8.5	6.0
9	8.1	25	29	29	109	182	158	63	97	6.8	8.4	6.0
10	6.8	21	22	30	93	190	233	53	79	5.8	8.4	6.0
11	5.6	16	23	130	86	212	387	48	68	4.9	8.6	5.6
12	5.5	14	23	155	104	259	346	43	59	4.9	8.9	5.5
13	5.5	48	18	137	89	226	270	39	51	4.9	9.0	5.5
14	6.0	49	15	111	77	186	210	35	44	4.7	8.7	5.5
15	5.5	46	14	106	70	165	169	34	38	4.6	8.7	5.5
16	5.7	38	29	102	64	142	421	45	36	4.3	8.6	5.5
17	5.7	34	47	85	62	123	768	55	43	4.2	8.4	5.5
18	4.9	31	40	74	63	133	632	48	40	4.3	8.4	5.5
19	4.9	28	35	65	61	519	530	42	36	4.4	8.4	5.5
20	4.9	26	34	54	59	637	455	42	36	4.2	6.2	7.2
21	5.0	28	32	49	58	580	372	42	34	4.3	6.2	9.5
22	4.9	32	29	45	59	600	327	40	29	5.5	6.2	9.1
23	4.9	34	26	60	63	452	289	62	24	4.3	6.2	9.1
24	4.9	38	29	86	66	327	305	63	21	4.4	6.2	9.1
25	5.2	30	29	90	67	252	434	54	18	7.7	6.2	9.1
26	5.2	26	32	89	67	180	433	50	11	10	6.2	9.1
27	4.7	26	31	82	63	153	342	90	9.1	10	6.2	9.1
28	4.9	20	31	75	61	273	267	90	16	10	6.2	8.5
29	4.9	35	35	68	---	278	208	85	28	10	6.2	7.5
30	4.9	36	33	64	---	227	165	94	21	10	6.2	7.5
31	4.9	---	31	65	---	187	---	99	---	10	6.2	---
TOTAL	183.4	842.6	922	2079	2615	7318	8961	2074	1642.1	257.0	240.8	205.4
MEAN	5.92	28.1	29.7	67.1	93.4	236	299	66.9	54.7	8.29	7.77	6.85
MAX	11	49	47	155	217	637	768	139	126	17	10	9.5
MIN	4.7	4.9	14	24	58	62	129	34	9.1	4.2	6.2	5.5

CAL YR 1982 TOTAL 18406.2 MEAN 50.4 MAX 429 MIN 4.7
WTR YR 1983 TOTAL 27340.3 MEAN 74.9 MAX 768 MIN 4.2

01384000 WANAQUE RIVER AT MONKS, NJ

LOCATION.--Lat 41°07'14", long 74°17'41", Passaic County, Hydrologic Unit 02030103, on left bank just upstream from Wanaque Reservoir and 0.3 mi downstream from bridge on Stonetown Road at Monks.

DRAINAGE AREA.--40.4 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1934 to current year. Monthly discharge only for October to December 1934, published in WSP 1302.

GAGE.--Water-stage recorder and concrete dam. Datum of gage is 303.17 ft National Geodetic Vertical Datum of 1929 (levels from New Jersey Geological Survey bench mark).

REMARKS.--Water-discharge records good. Records given herein include flow over spillway, through ports in dam, and down fish ladder in dam. Flow regulated by Greenwood Lake (see Passaic River Basin, reservoirs in).

COOPERATION.--Gage-height record collected in cooperation with North Jersey District Water Supply Commission.

AVERAGE DISCHARGE.--49 years, 81.7 ft³/s, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,910 ft³/s Mar. 21, 1980, gage height, 4.30 ft from high-water mark; no flow part of day in some years just after waste gate was closed and water was below intake to ports.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 400 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Jan. 11	0345	487	1.58	Mar. 28	0130	633	1.79
Feb. 3	0500	417	1.47	Apr. 10	1630	718	1.90
Mar. 19	1115	1000	2.23	Apr. 16	1945	*1200	2.43
Mar. 21	1530	984	2.21	Apr. 25	1630	603	1.75

Minimum daily discharge, 5.2 ft³/s July 17, 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	6.2	49	41	93	97	208	183	138	24	11	6.5
2	12	6.2	46	40	111	186	173	157	121	23	11	6.2
3	10	6.2	44	39	373	185	277	141	102	23	9.9	6.2
4	8.6	6.8	43	35	299	166	273	138	180	23	9.2	6.2
5	8.1	50	44	33	249	155	237	121	161	23	9.4	6.2
6	7.2	52	45	57	204	142	203	107	137	21	9.2	6.2
7	6.7	43	45	49	197	177	180	89	209	17	9.2	6.2
8	6.7	34	40	47	179	223	206	81	166	12	8.9	6.0
9	9.9	32	40	42	146	282	243	86	134	11	8.5	5.8
10	9.7	27	33	43	138	282	421	69	112	9.5	8.5	5.9
11	7.5	22	32	311	108	291	511	60	95	8.3	21	5.9
12	6.7	20	34	234	133	377	406	54	82	7.8	29	5.6
13	6.9	75	27	190	131	307	324	48	70	6.8	18	6.1
14	7.9	76	23	156	107	256	264	43	61	6.2	12	5.4
15	7.4	64	24	144	93	226	222	42	55	6.0	11	5.4
16	6.7	52	69	140	87	194	749	68	49	5.5	11	5.4
17	6.6	45	83	121	86	167	862	94	53	5.2	9.9	5.7
18	6.6	41	65	111	92	223	629	66	52	5.3	11	5.7
19	6.2	38	56	97	91	830	543	55	48	5.4	11	5.7
20	6.2	35	54	86	86	638	511	57	46	5.2	8.6	5.5
21	6.2	35	51	76	86	705	433	57	48	5.3	6.5	11
22	6.2	39	47	66	92	643	386	52	41	6.4	6.3	17
23	5.7	42	41	95	100	480	340	107	34	5.3	6.6	10
24	5.7	46	47	157	110	364	402	90	28	5.4	6.2	9.8
25	6.2	40	49	145	109	295	554	73	26	8.8	6.2	9.2
26	8.3	34	50	135	104	228	489	79	18	11	6.2	9.2
27	7.3	34	49	121	96	210	388	191	14	11	6.4	9.2
28	6.7	28	47	110	93	449	316	146	19	11	6.3	9.2
29	6.3	58	50	99	---	343	260	137	42	11	6.7	8.2
30	6.2	55	47	93	---	283	216	166	30	11	6.7	12
31	6.2	---	44	101	---	241	---	157	---	11	6.6	---
TOTAL	231.6	1142.4	1418	3214	3793	9645	11226	3014	2371	345.4	308.0	222.6
MEAN	7.47	38.1	45.7	104	135	311	374	97.2	79.0	11.1	9.94	7.42
MAX	13	76	83	311	373	830	862	191	209	24	29	17
MIN	5.7	6.2	23	33	86	97	173	42	14	5.2	6.2	5.4

CAL YR 1982 TOTAL 27582.4 MEAN 75.6 MAX 627 MIN 5.7
WTR YR 1983 TOTAL 36931.0 MEAN 101 MAX 862 MIN 5.2

01387000 WANAQUE RIVER AT WANAQUE, NJ

LOCATION.--Lat 41°02'33", long 74°17'36", Passaic County, Hydrologic Unit 02030103, on left bank 750 ft downstream from Raymond Dam in Wanaque, and 50 ft upstream from bridge on State Highway 511.

DRAINAGE AREA.--90.4 mi², considered as 94 mi² Oct. 1, 1928 to Sept. 30, 1934.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--December 1903 to December 1905 (gage heights only), September 1912 to April 1915, May 1919 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 210.00 ft National Geodetic Vertical Datum of 1929 (levels from New Jersey Geological Survey bench mark). Dec. 16, 1903, to Dec. 31, 1905, nonrecording gage on highway bridge at site 50 ft downstream at different datum. Sept. 15, 1912, to Apr. 1, 1922, nonrecording gage at site 200 ft downstream from present concrete control at different datum. Apr. 1, 1922 to Mar. 14, 1931, water-stage recorder at site 400 ft downstream from present concrete control at present datum.

REMARKS.--Water-discharge records good except those for periods of pipeline contruction, Feb. 8 to Sept. 30, which are fair. Flow regulated by Greenwood Lake (see Passaic River Basin, reservoirs in) 11 mi above station, and since 1928 by Wanaque Reservoir (see Passaic River Basin, reservoirs in). North Jersey Water Supply Commission diverts water for municipal supply from Wanaque Reservoir. Water is diverted to Wanaque Reservoir from Post Brook at Wanaque and from Ramapo River at Pompton Lakes (see Passaic River Basin, diversions).

COOPERATION.--Gage-height record collected in cooperation with North Jersey District Water Supply Commission.

AVERAGE DISCHARGE.--66 years, (water years 1913, 1914, 1920-83), 78.1 ft³/s, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,470 ft³/s Mar. 31, 1951, gage height, 9.12 ft, from rating curve extended above 4,300 ft³/s; minimum daily, 0.5 ft³/s Dec. 11, 12, 14-23, 1949, Sept. 11, 12, 1965.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,580 ft³/s Mar. 19, gage height, 6.85 ft; minimum, 1.8 ft³/s Feb. 9-22, gage height, 0.98 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	18	25	26	19	17	338	285	315	18	19	10
2	19	18	25	27	19	19	275	235	224	17	20	11
3		1	25	26	19	19	478	200	163	17	17	12
4	19	18	25	26	19	19	613	188	291	17	17	12
5	21	18	24	26	19	19	461	155	300	17	18	12
6	28	18	26	26	19	18	351	131	216	17	16	12
7	21	18	25	24	19	18	292	98	327	17	16	13
8	20	18	25	18	19	19	322	85	273	17	18	13
9	19	18	26	18	7.8	20	483	121	178	17	19	13
10	18	18	26	18	1.8	21	703	57	134	17	16	13
11	18	18	26	19	2.0	70	1250	53	108	17	15	13
12	18	18	26	18	1.8	425	932	33	77	17	11	14
13	18	18	26	18	1.8	677	642	27	39	17	9.7	14
14	18	18	26	18	1.8	552	470	20	23	18	14	14
15	18	18	28	18	3.6	469	370	19	20	17	12	16
16	18	18	30	18	6.2	354	1030	37	20	17	15	14
17	18	18	27	18	3.0	289	2220	42	19	17	16	14
18	18	18	26	18	1.8	345	1550	25	19	17	15	12
19	18	18	31	18	1.8	1870	1210	22	19	18	14	12
20	18	18	35	18	1.8	1700	1160	21	19	17	11	13
21	17	18	32	18	1.8	1460	948	22	18	18	11	19
22	16	22	38	18	6.1	1590	798	22	18	18	11	12
23	17	25	32	19	10	1160	623	107	18	18	12	12
24	16	25	26	19	10	798	733	133	18	18	11	12
25	19	25	26	19	10	588	1200	101	19	21	12	12
26	19	25	26	19	10	380	1120	95	16	24	12	12
27	18	25	33	19	9.5	347	799	389	16	27	9.8	11
28	18	25	37	19	9.5	930	575	332	17	25	10	24
29	18	26	33	19	---	825	430	260	19	20	9.8	65
30	18	26	31	19	---	577	341	348	18	19	9.7	26
31	18	---	26	19	---	416	---	454	---	18	9.7	---
TOTAL	577	602	873	623	254.1	16011	22717	4117	2961	569	426.7	462
MEAN	18.6	20.1	28.2	20.1	9.07	516	757	133	98.7	18.4	13.8	15.4
MAX	28	26	38	27	19	1870	2220	454	327	27	20	65
MIN	16	18	24	18	1.8	17	275	19	16	17	9.7	10

CAL YR 1982 TOTAL 13113.0 MEAN 35.9 MAX 568 MIN 2.3
WTR YR 1983 TOTAL 50192.8 MEAN 138 MAX 2220 MIN 1.8

01387000 WANAQUE RIVER AT WANAQUE, NJ--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1963 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: October 1963 to September 1980.

COOPERATION.--Analyses of fecal coliform and fecal streptococci by the MPN method, and selected water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
OCT										
12...	1130	18	151	7.0	10.0	9.4	83	9.0	2	<2
FEB										
09...	1130	1.9	152	7.2	2.0	--	--	1.1	2	<2
APR										
11...	1200	1430	106	7.2	6.5	13.0	107	1.5	33	11
JUN										
01...	1100	414	102	7.4	17.0	10.5	109	1.5	8	79
JUL										
26...	1200	24	98	7.3	11.0	10.9	98	1.5	<20	8
SEP										
06...	1030	13	102	7.1	11.0	10.5	95	.9	<200	<200

DATE	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT									
12...	41	11	3.3	11	.30	24	13	17	<.10
FEB									
09...	44	12	3.4	10	.90	28	14	18	<.10
APR									
11...	31	8.3	2.5	7.6	.50	17	13	14	<.10
JUN									
01...	28	7.5	2.3	7.0	.60	15	13	11	<.10
JUL									
26...	31	8.2	2.5	7.5	.70	18	11	12	<.10
SEP									
06...	31	8.4	2.5	7.1	.70	19	11	12	<.10

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHATE, TOTAL (MG/L AS PO4)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT									
12...	6.5	93	<.010	.100	.240	E.44	--	<.06	2.8
FEB									
09...	3.9	92	<.010	.250	.340	E.46	--	.06	2.6
APR									
11...	2.4	60	<.010	.100	.060	.27	.37	.09	2.9
JUN									
01...	2.3	77	<.010	<.100	E.050	.41	--	.15	3.3
JUL									
26...	4.4	75	.010	.240	<.050	.28	.52	.12	3.1
SEP									
06...	5.3	59	<.010	E.370	.080	.53	--	.06	2.0

01387420 RAMAPO RIVER AT SUFFERN, NY

LOCATION.--Lat 41°07'06", long 74°09'38", Rockland County, NY, Hydrologic Unit 02030103, on left bank, 145 ft downstream from highway bridge on New York State Thruway at Suffern, and 1.1 mi upstream from Mahwah River.

DRAINAGE AREA.--93.0 mi^2.

PERIOD OF RECORD.--June 1979 to current year.

GAGE.--Water-stage recorder. Concrete control. Datum of gage is 264.44 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair. Flow affected by diversion from Spring Valley Water Company well field upstream from station and by occasional regulation by Lake Sebago.

COOPERATION.--Figures of pumpage from well field furnished by Spring Valley Water Company.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 5,160 ft^3/s Mar. 22, 1980 (gage height about 11.1 ft) from rating curve extended above 1,800 ft^3/s on basis of runoff comparison with station 1.5 mi upstream; minimum 2.6 ft^3/s Sept. 30, 1981, gage height, 1.23 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,100 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 3	1830	1250	5.61	Apr. 11	0845	1390	5.92
Mar. 19	1230	*3590	*9.71	Apr. 17	0315	2160	7.41
Mar. 21	2145	2020	7.16	Apr. 20	1630	1180	5.45
Mar. 28	1545	1180	5.47	Apr. 25	2400	1910	6.96

Minimum discharge, 5.8 ft^3/s Sept. 6, gage height, 1.31 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	39	97	77	191	202	332	348	384	38	17	13
2	16	37	86	75	206	607	285	293	316	32	14	12
3	15	31	79	71	972	766	518	256	237	29	12	13
4	13	37	75	64	956	567	679	240	412	26	10	11
5	12	104	75	62	534	436	472	217	398	25	11	11
6	11	88	69	117	375	351	367	180	280	31	14	8.2
7	12	60	69	120	326	421	319	149	340	24	13	7.3
8	12	48	61	104	290	503	370	134	263	19	12	8.2
9	16	42	64	90	251	788	515	146	210	18	11	8.2
10	20	37	57	86	226	737	708	115	159	15	11	8.2
11	20	33	54	550	198	826	1270	99	134	15	21	9.0
12	18	31	53	509	180	1000	830	90	112	14	47	10
13	16	159	49	316	160	872	570	83	95	14	49	12
14	18	210	46	242	150	722	421	77	81	13	27	12
15	18	140	43	180	166	587	337	79	71	14	21	11
16	18	110	104	150	143	456	964	128	62	15	17	11
17	16	90	195	130	146	372	1940	212	81	13	15	12
18	15	77	137	120	180	484	1250	143	67	12	16	11
19	14	69	109	110	195	3040	952	109	57	14	15	10
20	13	71	107	110	173	2280	1130	117	60	23	14	9.5
21	12	66	99	110	169	1650	1030	117	60	24	14	22
22	12	61	92	109	187	1760	916	104	51	31	11	64
23	27	59	86	173	221	1090	704	219	44	21	12	34
24	46	57	90	324	240	718	781	180	37	18	12	24
25	50	52	102	303	240	506	1650	134	31	23	11	19
26	67	48	107	263	226	378	1600	159	27	18	11	17
27	57	46	99	230	198	348	952	655	24	15	11	16
28	53	43	92	202	187	1100	665	587	33	14	14	16
29	50	104	95	176	---	807	512	345	71	13	27	15
30	45	117	90	163	---	518	418	469	50	14	18	40
31	42	---	81	191	---	398	---	547	---	13	14	---
TOTAL	772	2166	2662	5527	7686	25290	23457	6731	4247	608	522	474.6
MEAN	24.9	72.2	85.9	178	275	816	782	217	142	19.6	16.8	15.8
MAX	67	210	195	550	972	3040	1940	655	412	38	49	64
MIN	11	31	43	62	143	202	285	77	24	12	10	7.3
‡	3.5	6.5	8.0	7.7	11	12	9.4	8.1	9.5	5.9	2.8	0.7

CAL YR 1982 TOTAL 54314.0 MEAN 149 MAX 2120 MIN 11 ‡ 9.3
WTR YR 1983 TOTAL 80142.6 MEAN 220 MAX 3040 MIN 7.3 ‡ 7.1

‡ Diversion, in cubic feet per second, by pumpage from well field upstream of station.

01387450 MAHWAH RIVER NEAR SUFFERN, NY

LOCATION.--Lat 41°08'27", long 74°07'01", Rockland County, NY, Hydrologic Unit 02030103, on left bank 13 ft upstream from bridge on U.S. Highway 202, 2.5 mi northeast of Suffern, and 4.8 mi upstream from mouth.

DRAINAGE AREA.--12.3 mi^2.

PERIOD OF RECORD.--August 1958 to current year.

REVISED RECORDS.--WDR NY-79-1: 1977.

GAGE.--Water-stage recorder. Datum of gage is 321.57 ft National Geodetic Vertical Datum of 1929. Prior to Nov. 18, 1976, water-stage recorder at site on right bank 13 ft downstream, at present datum.

REMARKS.--Records poor. Occasional regulation from unknown source.

AVERAGE DISCHARGE.--25 years, 24.7 ft^3/s, 27.27 in/yr.

EXTREMES FOR PERIOD OF RECORDS.--Maximum discharge, 1,840 ft^3/s Nov. 8, 1977, gage height, 9.91 ft, from rating curve extended above 850 ft^3/s on basis of contracted-opening measurements at gage heights 8.52 ft and 9.91 ft; minimum 0.05 ft^3/s Oct. 20, 21, 1970, result of temporary pumping from gage pool.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 200 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 19	1345	*683	*5.51	Apr. 16	2030	462	4.84
Mar. 21	1715	633	5.37	Apr. 25	1415	353	4.44
Mar. 28	0330	520	5.03	May 27	0200	249	3.98
Apr. 3	1400	312	4.27	May 30	2100	239	3.93
Apr. 10	1915	422	4.70				

Minimum discharge, 1.7 ft^3/s Sept. 16, gage height, 1.35 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.5	3.1	13	9.3	29	34	56	50	63	8.3	7.3	3.2
2	3.1	3.0	11	9.0	31	92	49	46	49	8.5	5.6	2.9
3	2.9	2.9	10	8.7	120	62	154	42	40	7.8	4.8	2.6
4	2.6	3.2	10	8.0	110	50	112	40	93	7.3	4.2	2.6
5	2.4	15	9.6	8.1	80	46	77	36	61	13	4.2	2.4
6	2.5	9.1	10	21	60	39	62	31	46	10	4.0	2.2
7	2.7	7.4	10	16	50	50	57	28	48	8.0	3.8	2.0
8	3.6	6.4	9.4	14	45	61	69	27	39	7.5	3.5	1.9
9	5.1	5.5	9.0	12	38	76	83	27	32	7.0	3.1	1.9
10	5.8	5.0	8.2	12	26	81	173	23	28	6.6	2.8	1.9
11	5.5	4.7	8.2	83	24	84	187	21	24	6.2	9.4	2.0
12	5.4	4.6	8.3	80	22	119	106	19	21	6.2	16	2.0
13	5.4	38	7.5	52	20	85	77	18	19	5.4	9.1	2.8
14	5.9	26	6.9	33	19	69	63	17	17	5.0	6.2	2.6
15	5.8	18	6.6	24	19	58	57	19	15	5.2	4.8	2.0
16	5.6	14	24	19	19	51	243	39	14	6.8	4.5	1.7
17	5.0	12	25	16	21	47	267	38	18	4.2	4.2	2.3
18	4.9	11	17	15	26	102	136	26	13	4.0	4.7	2.5
19	4.9	9.9	15	15	28	578	132	22	13	5.2	4.8	2.5
20	4.7	9.0	14	15	26	265	175	27	16	6.8	3.7	2.5
21	4.5	8.6	13	15	27	291	115	25	14	6.2	3.1	4.5
22	4.3	8.0	12	15	31	239	87	23	12	9.4	2.8	18
23	4.2	7.6	11	25	37	125	72	61	11	4.3	3.0	3.8
24	3.9	7.4	12	50	39	88	134	39	10	6.8	2.7	3.1
25	4.5	6.9	13	47	37	71	233	31	9.7	5.0	2.6	2.7
26	14	6.5	13	42	33	59	167	37	9.1	3.8	2.6	2.6
27	6.9	6.3	12	35	29	63	105	129	8.8	3.4	2.6	2.6
28	5.5	6.2	11	30	29	255	80	70	14	3.0	3.1	2.5
29	4.4	20	11	27	---	112	66	54	15	2.8	8.0	2.3
30	3.7	15	10	25	---	78	57	95	9.7	2.8	5.0	17
31	3.4	---	9.7	28	---	65	---	101	---	2.7	3.5	---
TOTAL	146.6	300.3	360.4	809.1	1075	3495	3451	1261	782.3	189.2	149.7	105.6
MEAN	4.73	10.0	11.6	26.1	38.4	113	115	40.7	26.1	6.10	4.83	3.52
MAX	14	38	25	83	120	578	267	129	93	13	16	18
MIN	2.4	2.9	6.6	8.0	19	34	49	17	8.8	2.7	2.6	1.7
CFSM	.39	.81	.94	2.12	3.12	9.19	9.35	3.31	2.12	.50	.39	.29
IN.	.44	.91	1.09	2.45	3.25	10.57	10.44	3.81	2.37	.57	.45	.32

CAL YR 1982 TOTAL 7005.8 MEAN 19.2 MAX 195 MIN 1.9 CFSM 1.56 IN 21.19
WTR YR 1983 TOTAL 12125.2 MEAN 33.2 MAX 578 MIN 1.7 CFSM 2.70 IN 36.67

NOTE.--No gage height record Jan. 11 to Feb. 10.

01387500 RAMAPO RIVER NEAR MAHWAH, NJ

LOCATION.--Lat 41°05'51", long 74°09'48", Bergen County, Hydrologic Unit 02030103, on left bank 350 ft downstream from State Highway 17, 0.6 mi downstream from Mahwah River, and 1.0 mi west of Mahwah. Water-quality samples collected at bridge 350 ft upstream from gage at high flows.

DRAINAGE AREA.--120 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1902 to December 1906, September 1922 t current year (October 1902 to February 1905 monthly discharge only, published in WSP 1302). Figures of daily discharge Feb. 10, 1903, to Dec. 31, 1904, published in WSP 97, 125, are unreliable and should not be used.

REVISED RECORDS.--WSP 781: 1904(M). WSP 1031: 1938, 1940. WSP 1552: 1923(M), 1924, 1925-26(M), 1927-28, 1933, 1937. WRD-NJ 1971: 1968(M).

GAGE.--Water-stage recorder. Datum of gage is 253.10 ft National Geodetic Vertical Datum of 1929. Prior to Dec. 31, 1906, nonrecording gage on former bridge at site 250 ft downstream at different datum. Sept. 1, 1922 to Dec. 23, 1936, water-stage recorder just below former bridge at present datum.

REMARKS.--Water-discharge records fair. Flow affected by diversion from Spring Valley (NY) Water Company well field upstream from station (see sta. 01387420). Occasional regulation from lakes and ponds upstream from the station.

AVERAGE DISCHARGE.--65 years (water years 1903-06,1923-83), 229 ft^3/s, 26.35 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 12,400 ft^3/s Oct. 9, 1903, gage height, 11.0 ft from graph based on once-daily gage readings, site and datum then in use, from rating curve extended above 1,400 ft^3/s; maximum gage height at present site and datum, 12.53 ft Oct. 16, 1955; minimum discharge, 4.6 ft^3/s Sept. 30, 1981 (possible regulation); minimum daily discharge, 6.1 ft^3/s Sept. 30, 1981 (possible regulation).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,400 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 19	1245	*4480	9.76	Apr. 11	0230	1560	7.26
Mar. 21	2345	2310	8.21	Apr. 17	0100	2410	8.30
Mar. 28	0315	1520	7.17	Apr. 25	2130	1960	7.83

Minimum discharge, 11.0 ft^3/s Sept. 9, 21, gage height, 2.02 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	41	121	96	230	273	534	531	615	61	39	20
2	21	40	108	93	263	850	454	451	497	54	36	19
3	19	36	99	89	1120	964	920	387	360	47	26	18
4	18	42	98	82	1100	702	1030	366	689	42	22	17
5	17	138	94	85	684	575	715	320	631	60	22	16
6	17	106	93	168	497	474	583	274	435	66	25	14
7	18	65	90	156	440	566	511	244	524	45	24	13
8	19	51	81	132	389	676	606	227	398	38	23	13
9	23	44	85	115	329	1030	784	232	298	35	21	13
10	27	39	77	117	293	947	1030	202	242	32	20	13
11	28	36	74	795	256	1080	1450	180	210	29	70	13
12	25	34	73	670	542	1210	1110	166	181	29	126	17
13	24	223	65	431	474	1110	818	154	156	28	81	19
14	25	278	61	311	279	929	636	142	136	26	44	16
15	27	186	60	273	206	744	537	148	119	28	35	15
16	27	142	182	267	192	616	1350	244	106	31	29	15
17	26	120	263	225	201	516	2070	316	128	27	26	15
18	25	104	183	197	243	696	1390	227	111	24	29	14
19	24	93	146	214	255	3630	1220	181	96	35	28	13
20	23	95	137	232	232	2430	1350	199	103	41	24	13
21	24	87	129	168	228	1850	1210	194	102	74	21	56
22	24	82	118	136	251	1900	1140	177	85	72	19	131
23	33	78	109	247	292	1290	964	383	73	38	19	45
24	47	75	119	452	328	1020	1080	275	62	45	18	30
25	53	70	132	408	321	746	1780	212	55	42	18	24
26	94	64	135	343	292	596	1670	263	49	33	18	21
27	66	62	123	283	255	589	1180	1020	46	29	17	20
28	55	60	117	244	244	1430	944	845	81	26	28	19
29	50	156	120	216	---	1110	725	527	126	25	41	18
30	46	151	113	205	---	770	620	733	81	24	28	105
31	43	---	103	237	---	625	---	931	---	24	22	---
TOTAL	990	2798	3508	7687	10436	31944	30411	10751	6795	1210	999	775
MEAN	31.9	93.3	113	248	373	1030	1014	347	227	39.0	32.2	25.8
MAX	94	278	263	795	1120	3630	2070	1020	689	74	126	131
MIN	17	34	60	82	192	273	454	142	46	24	17	13
CFSM	.27	.78	.94	2.07	3.11	8.58	8.45	2.89	1.89	.32	.27	.21
IN.	.31	.87	1.09	2.38	3.24	9.90	9.43	3.33	2.11	.38	.31	.24

CAL YR 1982 TOTAL 69627 MEAN 191 MAX 2290 MIN 17 CFSM 1.59 IN. 21.58
WTR YR 1983 TOTAL 108304 MEAN 297 MAX 3630 MIN 13 CFSM 2.47 IN. 33.57

01387500 RAMAPO RIVER NEAR MAHWAH, NJ--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1963 to current year.

PERIOD OF DAILY RECORD.--
SUSPENDED-SEDIMENT DISCHARGE: February 1964 to June 1965.

COOPERATION.--Analyses of fecal coliform and fecal streptococci by the MPN method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
OCT										
07...	1100	19	484	7.4	17.0	5.4	55	20	5400	540
13...	0915	23	456	7.6	14.0	6.0	59	--	--	--
FEB										
08...	1130	392	215	7.0	1.5	14.3	103	1.5	13	5
APR										
12...	1245	1110	143	7.7	9.0	12.0	104	2.1	--	--
JUN										
08...	1115	401	184	7.6	18.0	9.0	95	1.6	220	170
JUL										
25...	1300	45	389	7.9	21.0	7.2	81	3.6	79	130
AUG										
30...	1130	28	407	7.7	21.5	6.0	68	2.8	330	170

DATE	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT									
07...	140	36	11	44	2.1	75	24	70	.10
13...	110	31	8.9	40	2.2	74	19	68	.20
FEB									
08...	51	14	3.8	19	.70	30	16	35	.10
APR									
12...	41	11	3.2	12	.60	25	16	18	.10
JUN									
08...	54	15	3.9	14	.80	37	16	23	.10
JUL									
25...	110	29	8.0	30	1.9	76	23	55	.20
AUG									
30...	110	31	8.7	35	2.1	80	24	59	.20

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHATE, TOTAL (MG/L AS PO4)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT									
07...	9.3	264	E.120	1.10	1.30	2.3	3.4	1.10	4.0
13...	7.7	238	--	--	--	--	--	--	--
FEB									
08...	6.9	128	<.010	.400	.021	.33	.73	.21	2.2
APR									
12...	5.9	89	.020	.400	.240	.55	.95	.15	3.1
JUN									
08...	6.8	103	.010	.500	.190	.60	1.1	.09	3.0
JUL									
25...	7.0	235	.070	1.20	.610	E1.1	--	.86	3.3
AUG									
30...	6.8	248	.070	1.30	.310	1.0	2.3	.71	3.9

01387500 RAMAPO RIVER NEAR MAHWAH, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	NITROGEN,NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	CARBON, INORGANIC, TOT IN BOT MAT (G/KG AS C)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (G/KG AS C)	ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)
OCT										
07...	1100	1300	.3	5.9	<1	<1	4	10	0	2100

DATE	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)	MERCURY RECOV. FM BOTTOMCMATERIAL (UG/L AS HG)	NICKEL, RECOV. FM BOTTOM MATERIAL (UG/G AS NI)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	PCB, TOTAL IN BOTTOM MATERIAL (UG/KG)	PCN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT										
07...	40	150	<.01	10	<1	50	5	<1.0	<.1	6.0

DATE	DDD, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIAZINON, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDOSULFAN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ETHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL IN BOTOM MATERIAL (UG/KG)	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)
OCT										
07...	2.0	<.1	.4	<.1	.1	<.1	<.1	<.1	<.1	<.1

DATE	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)	MALATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	METHOXYCHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARATHION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRITHION, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL IN BOTTOM MATERIAL (UG/KG)	PARATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	PERTHANE IN BOTTOM MATERIL (UG/KG)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)	TRITHION, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT										
07...	<.1	<.1	<.1	<.1	<.1	<.1	<.1	<1.00	<10	<.1

01388000 RAMAPO RIVER AT POMPTON LAKES, NJ

LOCATION.--Lat 40°59'33", long 74°16'44", Passaic County, Hydrologic Unit 02030103, on right end of dam at pumping station in Pompton Lakes and 2.0 mi upstream from mouth.

DRAINAGE AREA.--160 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1921 to current year.

REVISED RECORDS.--WSP 1552: 1922(M), 1924-25, 1929-31(M), 1934-35(M). WRD-NJ 1970: 1968-69.

GAGE.--Water-stage recorder and concrete dam. Datum of gage is 191.08 ft National Geodetic Vertical Datum of 1929. Prior to October 1, 1981, at datum 10.00 ft higher.

REMARKS.--Water-discharge records good. Diversion by North Jersey Water Supply Commission to Wanaque Reservoir since December 1953, for municipal supply (records given herein). Slight regulation by Pompton Lake, capacity, 300,000,000 gal.

AVERAGE DISCHARGE.--62 years, 302 ft³/s, 25.64 in/yr, adjusted for diversion since Dec. 1, 1953.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,300 ft³/s Mar. 12, 1936, gage height, 13.56 ft, present datum, from rating curve extended above 7,000 ft³/s on basis of theoretical weir formula; maximum gage height, 14.40 ft Oct. 16, 1955, present datum; no flow part of September 30, 1980 and many days in 1981, 1982.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,600 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Mar. 19	2015	*5160	12.66	Apr. 11	0130	2350	11.63
Mar. 21	2315	3410	12.05	Apr. 17	0530	3600	12.12
Mar. 28	0845	2320	11.62	Apr. 25	2400	2760	11.80
Apr. 3	1830	1650	11.31				

Minimum discharge, 13.0 ft³/s Sept. 12, 21, gage height, 10.05 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	87	60	168	107	165	354	750	744	892	107	40	32
2	49	56	150	51	163	812	644	641	701	93	55	29
3	40	54	136	51	945	1070	1160	556	545	81	44	27
4	37	52	133	52	1260	876	1430	515	866	73	35	26
5	34	164	126	54	915	717	1050	468	872	72	34	24
6	34	176	121	75	653	601	835	403	647	103	31	21
7	33	116	118	66	561	657	717	359	651	75	32	23
8	33	89	64	50	507	817	808	328	578	63	30	22
9	41	77	60	51	431	1130	1140	326	445	57	29	20
10	34	69	57	61	373	1120	1430	297	368	50	24	20
11	38	61	56	758	327	1230	2240	267	321	48	36	18
12	38	58	54	719	288	1450	1620	248	278	46	160	18
13	39	288	58	425	347	1370	1180	233	242	42	136	23
14	38	365	69	266	311	1100	936	226	215	39	79	23
15	34	259	72	211	284	951	773	222	189	37	56	22
16	33	198	121	198	265	800	1780	318	166	37	48	20
17	31	162	192	147	268	679	3310	436	163	37	43	21
18	31	145	95	95	314	811	2200	350	170	33	44	20
19	30	132	55	70	349	3860	1730	279	162	37	47	20
20	29	133	57	70	326	3990	2010	289	149	55	40	18
21	29	129	58	66	316	2720	1740	294	160	69	33	35
22	27	119	59	73	345	2990	1500	271	140	201	30	178
23	29	110	60	143	398	1940	1260	576	122	77	28	88
24	39	102	61	422	441	1340	1540	458	105	65	27	50
25	60	91	154	404	438	1030	2600	343	90	66	26	40
26	113	84	62	321	407	813	2570	341	80	56	26	35
27	104	78	56	242	362	749	1770	1180	75	46	24	32
28	84	76	56	186	341	2100	1290	1150	100	41	25	29
29	74	169	56	146	---	1620	1060	801	191	39	43	27
30	68	206	56	122	---	1110	879	865	145	40	45	72
31	63	---	53	166	---	890	---	1290	---	40	37	---
TOTAL	1453	3878	2693	5868	12100	41697	43952	15074	9828	1925	1387	1033
MEAN	46.9	129	86.9	189	432	1345	1465	486	328	62.1	44.7	34.4
MAX	113	365	192	758	1260	3990	3310	1290	892	201	160	178
MIN	27	52	53	50	163	354	644	222	75	33	24	18
(†)	0	0	0	0	0	0	0	0	0	0	0	0
MEAN‡	46.9	129	86.9	189	432	1345	1465	486	328	62.1	44.7	34.4
CFSM‡	0.29	0.81	0.54	1.18	2.70	8.41	9.16	3.04	2.05	0.39	0.28	0.21
IN.‡	0.34	0.90	0.63	1.36	2.81	9.69	10.22	3.50	2.29	0.45	0.32	0.24

CAL YR 1982 TOTAL 81100.46 MEAN 222 MAX 2450 MIN 0 MEAN‡ 252 CFSM‡ 1.59 IN.‡ 21.40
WTR YR 1983 TOTAL 140888 MEAN 386 MAX 3990 MIN 18 MEAN‡ 386 CFSM‡ 2.41 IN.‡ 32.76

† Diversion, in cubic feet per second, at station to Wanaque Reservoir for municipal supply. Records of diversion furnished by North Jersey District Water Supply Commission.

‡ Adjusted for diversion.

01388500 POMPTON RIVER AT POMPTON PLAINS, NJ

LOCATION.--Lat 40°58'09", long 74°16'56", Passaic County, Hydrologic Unit 02030103, on left bank in Passaic Valley Water Commission pumping station, 800 ft below confluence of Pequannock and Ramapo Rivers, 100 ft upstream from Jackson Avenue Bridge, and 0.7 mi east of Pompton Plains.

DRAINAGE AREA.--355 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1903 to December 1904, May 1940 to current year. Monthly discharge only for some periods, published in WSP 1302.

REVISED RECORDS.--WSP 1202: 1945(M).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 160.00 ft National Geodetic Vertical Datum of 1929. March 1903 to December 1904, nonrecording gage on main spillway of dam 2,000 ft upstream at different datum. May 1940 to September 1964 two water-stage recorders, each above a concrete dam about 2,000 ft upstream at datum 14.46 ft higher.

REMARKS.--Water-discharge records fair. Water diverted from reservoirs on Pequannock and Wanaque Rivers, from Pompton River to Point View Reservoir and from Ramapo River to Wanaque Reservoir for municipal supply (see Passaic River Basin, diversions). Flow regulated by Canistear, Oak Ridge, Clinton, Charlotteburg and Echo Lake Reservoirs on Pequannock River and by Greenwood Lake and Wanaque Reservior on Wanaque River (see Passaic River Basin, reservoirs in).

COOPERATION.--Gage-height record collected in cooperation with Passaic Valley Water Commission.

AVERAGE DISCHARGE.--44 years, (water years 1904, 1941-83), 480 ft³/s, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 28,340 ft³/s Oct. 10, 1903, gage height, 14.3 ft, site and datum then in use, by computation of peak flow over dam; no flow Aug. 18-20, 1904.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,200 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Mar. 19	2400	*10100	18.27	Apr. 11	0530	4970	14.42
Mar. 22	0115	7220	16.28	Apr. 17	0715	8710	17.34
Mar. 28	1345	4430	13.90	Apr. 25	2045	5460	14.87

Minimum discharge, 45 ft³/s Sept. 20, 21, gage height, 7.21 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	135	100	261	195	305	465	1550	1360	1570	153	90	64
2	99	96	233	140	317	1130	1310	1160	1210	134	98	59
3	85	93	210	138	1510	1400	2180	950	866	123	88	57
4	85	93	203	133	1750	1180	2680	890	1490	112	76	55
5	81	307	198	139	1370	956	1980	780	1530	112	75	55
6	80	266	194	199	981	804	1650	673	1110	137	73	54
7	79	175	193	172	834	915	1410	537	1260	117	72	51
8	78	142	134	131	701	1170	1520	468	1140	102	68	50
9	95	124	127	128	564	1620	2110	520	775	95	64	49
10	77	114	126	146	470	1640	2770	427	577	86	60	49
11	76	107	125	1340	422	1780	4730	388	462	83	88	48
12	76	102	134	1110	408	2150	3390	353	395	80	234	51
13	79	422	130	649	448	2210	2350	333	345	79	195	61
14	93	442	138	433	406	1820	1870	314	310	75	122	54
15	88	339	137	372	380	1610	1620	306	277	73	95	51
16	85	281	268	359	365	1380	3980	416	252	73	84	50
17	81	231	335	299	369	1180	8170	543	241	71	77	49
18	79	201	205	227	413	1400	5510	457	259	69	77	50
19	78	181	145	172	440	7160	3900	374	267	96	89	47
20	77	186	158	166	415	8580	4140	376	241	111	75	46
21	77	190	159	161	406	5960	3470	376	246	139	66	84
22	73	179	159	165	437	6560	3030	357	210	349	62	276
23	73	172	153	295	516	4260	2450	791	179	159	59	127
24	79	156	147	672	580	2800	2740	700	158	144	57	88
25	112	146	254	622	575	2150	4850	494	137	126	56	71
26	200	134	162	491	525	1600	4980	543	122	110	54	65
27	162	129	144	402	464	1460	3400	1930	114	100	54	63
28	136	128	151	343	441	3960	2500	1830	172	91	58	59
29	122	286	151	297	---	3350	00	1360	293	82	77	65
30	111	305	145	269	---	2310	1600	1620	206	86	74	122
31	104	---	143	308	---	1830	---	2130	---	98	68	---
TOTAL	2955	5827	5422	10673	16812	76790	89840	23756	16414	3465	2585	2070
MEAN	95.3	194	175	344	600	2477	2995	766	547	112	83.4	69.0
MAX	200	442	335	1340	1750	8580	8170	2130	1570	349	234	276
MIN	73	93	125	128	305	465	1310	306	114	69	54	46

CAL YR 1982 TOTAL 130149 MEAN 357 MAX 3470 MIN 47
WTR YR 1983 TOTAL 256609 MEAN 703 MAX 8580 MIN 46

01388600 POMPTON RIVER AT PACKANACK LAKE, NJ

LOCATION.--Lat 40°56'36", long 74°16'47", Morris County, Hydrologic Unit 02030103, at bridge on State Highway 504 in Packanack Lake, and 2.2 mi downstream from confluence of Pequannock and Wanaque Rivers.

DRAINAGE AREA.--361 mi^2.

WATER-QUALITY RECORDS

PERIOD OF RECORD.--February 1979 to current year.

COOPERATION.--Analyses of fecal coliform and fecal streptococci by the MPN method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
OCT 13...	1300	76	318	6.9	15.0	6.8	67	3.0	<200	500
FEB 17...	1330	362	270	7.6	2.0	13.8	99	1.1	920	350
APR 14...	1100	1980	140	7.6	8.5	12.1	102	.9	<20	<2
JUN 07...	1030	1310	139	7.4	19.0	8.9	96	6.6	220	70
JUL 28...	1100	90	284	7.6	24.0	7.0	82	4.2	<200	200
AUG 29...	1030	76	301	7.4	24.0	5.6	66	4.8	1300	130

DATE	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFIDE TOTAL (MG/L AS S)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 13...	90	25	6.8	24	1.4	59	--	22	37	.10
FEB 17...	67	18	5.4	25	.90	39	--	21	40	<.10
APR 14...	40	11	3.1	11	.70	24	--	16	18	<.10
JUN 07...	44	12	3.4	9.8	.80	27	<.5	16	17	.10
JUL 28...	85	23	6.6	19	1.6	54	--	23	36	.10
AUG 29...	85	23	6.8	23	2.0	54	--	23	37	.10

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHATE, TOTAL (MG/L AS PO4)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 13...	6.3	185	E.130	.900	.820	E1.4	--	.31	3.9
FEB 17...	5.6	161	<.010	.800	.300	.57	1.4	.27	2.4
APR 14...	5.6	78	.010	.300	.120	.52	.82	.15	3.1
JUN 07...	6.0	96	.010	.400	.070	.40	.80	.33	4.2
JUL 28...	4.8	170	.110	.900	.210	.79	1.7	<.06	5.3
AUG 29...	5.8	163	.190	E1.20	.470	1.3	--	.86	4.7

01388600 POMPTON RIVER AT PACKANACK LAKE, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	NITRO-GEN,NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	CARBON, INOR-GANIC, TOT IN BOT MAT (G/KG AS C)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (G/KG AS C)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC TOTAL IN BOT-TOM MA-TERIAL (UG/G AS AS)	BERYL-LIUM, TOTAL RECOV-ERABLE (UG/L AS BE)	BORON, TOTAL RECOV-ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CADMIUM RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CD)
OCT											
13...	1300	1100	<.1	2.5	--	--	<1	--	--	--	<1
JUN											
07...	1030	--	--	--	<10	1	--	<10	40	1	--

DATE	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	CHRO-MIUM, RECOV. FM BOT-TOM MA-TERIAL (UG/G)	COBALT, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CO)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	COPPER, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	LEAD, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS PB)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MANGA-NESE, RECOV. FM BOT-TOM MA-TERIAL (UG/G)
OCT											
13...	--	2	<10	--	<10	--	1700	--	20	--	120
JUN											
07...	10	--	--	5	--	490	--	2	--	80	--

DATE	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	MERCURY RECOV. FM BOT-TOMCMA-TERIAL (UG/L AS HG)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	NICKEL, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS NI)	SELE-NIUM, TOTAL (UG/L AS SE)	SELE-NIUM, TOTAL IN BOT-TOM MA-TERIAL (UG/G)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	ZINC, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS ZN)	PHENOLS TOTAL (UG/L)	PCB, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	PCN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)
OCT											
13...	--	<.01	--	<10	--	<1	--	50	--	<1	<1.0
JUN											
07...	<.1	--	3	--	<1	--	20	--	<1	--	--

DATE	ALDRIN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	CHLOR-DANE, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	DDD, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	DDE, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	DDT, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	DI-AZINON, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	DI-ELDRIN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	ENDO-SULFAN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	ENDRIN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	ETHION, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	HEPTA-CHLOR, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)
OCT											
13...	<.1	5.0	14	24	54	<.1	.8	<.1	<.1	<.1	<.1
JUN											
07...	--	--	--	--	--	--	--	--	--	--	--

DATE	HEPTA-CHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	MALA-THION, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	METH-OXY-CHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARA-THION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRI-THION, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	PARA-THION, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	PER-THANE IN BOTTOM MATERIL (UG/KG)	TOXA-PHENE, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	TRI-THION, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)
OCT											
13...	<.1	<.1	<.1	<.1	<.1	<.1	<.1	<.1	<1.00	<10	<.1
JUN											
07...	--	--	--	--	--	--	--	--	--	--	--

01389500 PASSAIC RIVER AT LITTLE FALLS, NJ
(National stream quality accounting network station)

LOCATION.--Lat 40°53'05", long 74°13'35", Passaic County, Hydrologic Unit 02030103, on left bank 0.6 mi downstream from Beattie's Dam in Little Falls, and 1.0 mi upstream from Peckman River. Water-quality monitor located 0.5 mi upstream from gaging station.

DRAINAGE AREA.--762 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1897 to current year. Monthly discharge only for September 1897, published in WSP 1302. Published as "at Paterson" September 1897 to September 1955.

GAGE.--Water-stage recorder. Datum of gage is 120.00 ft National Geodetic Vertical Datum of 1929 (levels by Passaic Valley Water Commission). Prior to Jan. 8, 1933, nonrecording gage and Jan. 8, 1933, to Sept. 30, 1955, water-stage recorder, at site 3.7 mi downstream at National Geodetic Vertical Datum of 1929 (levels from New Jersey Geological Survey bench mark).

REMARKS.--Water-discharge records good. Diurnal fluctuation at medium and low flow caused by hydroelectric plant at Beattie's Dam. Flow regulated by reservoirs in Rockaway, Pequannock, Wanaque, and Pompton River Basin (see Passaic River Basin. reservoirs in). Large diversions for municipal supply from Passaic River above Beattie's Dam, and from Rockaway, Pequannock, and Wanaque Rivers (see Passaic River Basin, diversions). In addition, the Commonwealth Water Co., diverts from Canoe Brook near Summit and from Passaic River (see Passaic River Basin, diversions); that company and the city of East Orange also divert water for municipal supply by pumping wells.

COOPERATION.--Gage-height record collected in cooperation with the Passaic Valley Waton.

AVERAGE DISCHARGE.--86 years, 1,159 ft^3/s, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 31,700 ft^3/s Oct. 10, 1903, present site; no flow July 3-5, 1904, July 16, 23, 1905.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 4,400 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 22	1715	*9740	9.00	Apr. 12	0800	6830	7.46
Mar. 29	0930	5800	6.86	Apr. 19	0445	9380	8.82
Apr. 4	2245	4470	5.99	Apr. 27	0445	6880	7.49

Minimum discharge, 67 ft^3/s Sept. 12 and 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	240	186	661	347	766	1080	4020	3470	3640	778	230	129
2	215	179	591	325	770	1800	3380	3000	3260	522	208	116
3	167	174	544	287	1720	2210	3710	2600	2850	393	193	103
4	154	170	514	243	2410	2210	4380	2300	2920	339	160	92
5	147	471	491	288	2350	2090	4370	2040	3000	304	144	84
6	147	572	474	620	2070	1860	4020	1760	2720	274	141	88
7	144	417	470	687	1810	1800	3560	1440	2540	269	131	90
8	144	310	387	573	1520	2000	3420	1220	2470	239	123	89
9	152	249	316	461	1280	2470	3960	1160	2050	220	119	90
10	139	232	289	441	1020	2770	4530	1070	1590	196	113	86
11	132	216	256	1960	799	2980	6090	961	1220	184	187	83
12	129	203	254	2160	476	3470	6760	863	995	189	668	79
13	135	758	230	1990	833	3950	6300	798	835	187	692	142
14	164	1060	227	1780	941	3890	5490	735	710	178	516	141
15	162	855	245	1600	862	3570	4670	727	592	166	306	105
16	152	614	430	1370	829	3180	5420	845	542	174	179	87
17	138	469	796	1040	821	2770	8100	1100	505	161	175	81
18	131	419	780	733	930	2750	9320	978	511	144	184	79
19	132	380	590	472	1100	5150	9380	788	546	211	235	73
20	129	348	489	425	1120	7800	9080	802	777	337	165	75
21	127	343	459	419	1100	9200	8250	966	891	369	135	98
22	119	327	423	403	1170	9700	7310	1060	780	673	116	548
23	114	309	386	576	1370	9450	6390	1770	593	404	110	417
24	114	283	375	1310	1510	8080	5820	1880	447	293	105	233
25	162	264	439	1570	1570	6630	6370	1780	382	288	100	156
26	477	233	437	1510	1510	5340	6840	1710	324	248	99	126
27	509	230	396	1350	1360	4410	6830	2810	273	214	97	116
28	352	218	390	1120	1170	5270	5950	3160	436	187	92	111
29	261	566	390	881	---	5780	4970	3100	931	173	183	108
30	221	761	365	719	---	5460	4130	3200	959	162	201	252
31	199	---	346	739	---	4750	---	3720	---	238	147	---
TOTAL	5708	11816	13440	28399	35187	133870	172820	53813	40289	8714	6254	4077
MEAN	184	394	434	916	1257	4318	5761	1736	1343	281	202	136
MAX	509	1060	796	2160	2410	9700	9380	3720	3640	778	692	548
MIN	114	170	227	243	476	1080	3380	727	273	144	92	73

CAL YR 1982 TOTAL 297567 MEAN 815 MAX 4120 MIN 114
WTR YR 1983 TOTAL 514387 MEAN 1409 MAX 9700 MIN 73

01389500 PASSAIC RIVER AT LITTLE FALLS, NJ--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1963 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1980 to current year.
WATER TEMPERATURES: Water years 1963 to 1980 (once daily), September 1980 to current year.
DISSOLVED OXYGEN: October 1970 to September 1980 (once daily).
SUSPENDED-SEDIMENT DISCHARGE: August 1963 to July 1965.

INSTRUMENTATION.--Water-quality monitor since October 1980.

REMARKS.--Missing continuous water-quality records are the result of malfunction of the instrument.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 841 momhos Jan. 26, 1982; minimum, 116 micromhos March 20, 1983.
WATER TEMPERATURES: Maximum, 29.5°C July 12, 1981; minimum, 0.0°C on many days during winter months.
DISSOLVED OXYGEN: Maximum daily, 14.4 mg/L Jan. 7, 1973; minimum daily, 1.7 mg/L June 23, 1976.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 571 micromhos Sept. 18; minimum, 116 micromhos March 20.
WATER TEMPERATURES: Maximum, 28.5°C July 18; minimum, 0.0°C on many days during winter months.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	TURBIDITY (NTU)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
NOV 24...	1100	280	428	7.5	10.5	8.0	7.3	66	6.5	K690	600
JAN 26...	1115	1590	318	7.4	1.5	4.9	12.9	92	3.1	80	K2700
MAR 25...	1115	6690	158	7.0	4.5	4.2	12.6	97	1.8	K50	500
MAY 12...	1200	860	283	7.6	14.0	5.6	8.7	84	4.3	340	300
JUL 22...	1330	680	308	7.7	25.0	16	6.7	81	5.7	--	K16000
SEP 28...	1300	106	487	8.0	17.5	7.9	8.8	91	4.7	K13	460

DATE	HARDNESS (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)
NOV 24...	110	28	9.0	44	3.2	57	43	55	.20	12	264
JAN 26...	73	19	6.1	32	1.6	36	24	54	<.10	9.5	172
MAR 25...	42	11	3.6	13	1.1	24	17	20	<.10	6.8	104
MAY 12...	87	23	7.2	23	2.1	49	25	34	.20	9.1	168
JUL 22...	89	24	7.0	21	2.3	54	27	38	.20	7.7	180
SEP 28...	130	34	11	50	3.8	69	40	68	.20	14	297

DATE	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, DISSOLVED (MG/L AS P)	PHOSPHORUS, ORTHO, DISSOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
NOV 24...	21	16	93	1.80	2.50	2.9	.720	.490	.480	5.3
JAN 26...	13	56	100	.910	.810	.81	.230	.140	.140	4.7
MAR 25...	18	325	60	.510	.140	.50	.090	.040	.010	5.0
MAY 12...	17	39	95	.980	.940	1.6	.280	.120	.110	6.1
JUL 22...	29	53	97	1.40	.860	1.8	.290	.230	.200	4.1
SEP 28...	16	4.6	98	2.70	2.20	3.7	.540	.450	.450	5.8

01389500 PASSAIC RIVER AT LITTLE FALLS, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	BERYLLIUM, DISSOLVED (UG/L AS BE)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)
NOV											
24...	1100	<10	1	22	<1	<1	<1	<3	9	170	2
JAN											
26...	1115	<10	1	21	<1	<1	--	6	8	69	<1
MAY											
12...	1200	10	1	41	<0	<1	2	<3	3	6	2
SEP											
28...	1300	190	1	24	<0	<1	<1	<3	1	<3	2

DATE	LITHIUM DISSOLVED (UG/L AS LI)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY DISSOLVED (UG/L AS HG)	MOLYBDENUM, DISSOLVED (UG/L AS MO)	NICKEL, DISSOLVED (UG/L AS NI)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)	STRONTIUM, DISSOLVED (UG/L AS SR)	VANADIUM, DISSOLVED (UG/L AS V)	ZINC, DISSOLVED (UG/L AS ZN)
NOV										
24...	<4	150	.3	10	4	<1	<1	110	<6	7
JAN										
26...	<4	75	.6	<10	3	<1	1	75	<6	14
MAY										
12...	<4	120	.1	<10	3	<1	<1	83	<6	11
SEP										
28...	<4	85	.4	<10	1	<1	<1	130	<6	<3

01389500 PASSAIC RIVER AT LITTLE FALLS, NJ--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	395	367	382	480	470	477	336	318	328	369	350	364
2	417	374	401	475	461	468	330	312	320	357	344	349
3	410	400	406	484	475	479	350	324	332	373	359	366
4	419	406	410	486	479	482	352	342	348	398	362	378
5	436	419	428	485	392	449	350	334	343	401	372	393
6	470	436	451	449	385	428	348	337	342	439	331	377
7	476	462	470	383	371	378	357	340	348	454	357	390
8	466	454	459	386	382	385	346	341	343	374	342	353
9	476	467	472	419	387	400	359	346	354	346	314	327
10	475	450	459	453	421	438	357	352	355	353	324	343
11	499	458	474	454	419	439	369	360	367	307	228	255
12	505	495	501	423	413	417	395	370	387	229	210	219
13	532	498	519	426	324	382	396	387	392	219	209	212
14	528	504	516	401	336	364	404	390	399	234	220	226
15	502	492	496	336	303	320	461	401	434	244	235	239
16	495	487	490	339	327	335	511	427	465	282	244	261
17	497	493	495	---	---	---	493	432	470	330	283	304
18	511	498	505	---	---	---	461	364	396	382	332	355
19	515	508	512	---	---	---	374	364	368	383	372	380
20	509	483	493	---	---	---	369	331	346	381	364	372
21	493	484	487	---	---	---	353	333	339	391	369	376
22	519	492	500	---	---	---	411	357	391	399	377	388
23	533	521	528	---	---	---	419	405	413	443	383	399
24	535	504	520	440	433	---	404	391	396	448	385	420
25	513	496	506	437	396	418	401	395	399	374	323	348
26	494	408	446	418	396	406	418	377	390	321	303	313
27	504	409	463	419	401	412	423	401	416	302	295	298
28	410	367	389	423	399	413	400	373	386	303	297	300
29	378	366	374	421	323	377	383	359	370	313	302	308
30	427	379	402	426	302	352	373	360	366	324	311	315
31	470	428	445	---	---	---	371	363	366	349	323	340
MONTH	535	366	464	486	302	410	511	312	376	454	209	331

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	349	338	344	290	278	283	168	158	164	195	185	191
2	343	313	325	293	253	271	179	169	175	203	195	199
3	320	249	272	253	223	242	183	155	167	213	205	209
4	246	199	216	222	217	219	164	154	157	217	212	216
5	209	197	201	225	218	221	156	153	155	229	216	223
6	227	210	218	234	225	229	159	153	156	240	227	235
7	254	227	235	237	229	233	171	158	165	254	238	245
8	277	252	261	233	218	227	178	167	175	263	256	260
9	307	279	295	218	209	214	167	162	165	264	252	258
10	320	291	304	208	187	198	168	142	157	271	251	259
11	320	303	311	190	188	189	146	137	141	280	272	276
12	321	299	306	190	175	180	140	136	138	290	277	285
13	298	285	292	177	173	175	143	137	140	312	291	305
14	317	284	301	188	178	183	151	143	147	324	308	315
15	330	313	319	191	187	189	161	152	156	324	317	321
16	353	323	332	198	189	193	164	129	145	324	308	313
17	402	356	379	207	197	202	129	122	123	309	281	290
18	445	403	418	215	169	205	133	123	128	296	285	291
19	453	431	441	167	120	149	145	133	137	293	283	285
20	435	389	410	126	116	120	150	144	147	310	295	302
21	386	360	367	143	128	135	150	146	147	314	273	293
22	359	346	351	134	129	130	160	150	155	281	266	274
23	345	314	328	138	129	134	169	161	166	261	220	228
24	313	290	299	141	139	140	177	163	169	218	198	207
25	289	279	284	148	141	144	163	147	155	208	198	202
26	279	274	276	162	147	156	147	144	146	221	207	215
27	279	273	277	174	159	168	157	149	154	204	169	183
28	283	276	280	157	144	150	166	156	161	169	156	161
29	---	---	---	147	144	146	175	166	171	157	152	155
30	---	---	---	152	148	150	186	176	181	157	150	152
31	---	---	---	158	151	154	---	---	---	152	145	147
MONTH	453	197	309	293	116	185	186	122	155	324	145	242

01389500 PASSAIC RIVER AT LITTLE FALLS, NJ--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	153	146	149	290	243	267	---	---	---	411	400	404
2	165	150	159	312	293	304	---	---	---	432	404	421
3	178	166	172	323	310	315	---	---	---	460	434	446
4	184	166	173	339	325	334	---	---	---	469	457	464
5	170	166	168	360	336	347	---	---	---	487	468	472
6	176	167	172	366	350	357	---	---	---	492	471	476
7	181	170	176	357	346	352	---	---	---	489	479	484
8	181	170	175	371	347	363	---	---	---	501	491	495
9	200	179	189	384	365	376	---	---	---	517	502	511
10	218	200	208	389	374	381	---	---	---	525	516	522
11	234	219	225	412	387	398	---	---	---	529	520	525
12	256	234	247	422	410	417	---	---	---	536	526	532
13	273	254	264	435	421	427	---	---	---	541	490	528
14	292	271	281	449	431	437	---	---	---	525	491	513
15	300	290	294	451	433	443	---	---	---	556	529	545
16	315	301	309	441	436	438	385	368	379	551	520	533
17	341	316	325	437	422	427	404	378	391	566	539	556
18	352	337	345	426	419	423	429	402	415	571	544	563
19	344	309	335	428	402	420	419	385	403	544	531	537
20	322	270	302	429	365	391	438	417	429	546	521	529
21	316	230	259	464	323	430	461	436	449	567	539	559
22	263	249	258	---	---	---	445	431	436	538	354	456
23	293	264	276	---	---	---	464	446	455	497	355	418
24	316	294	305	---	---	---	463	443	454	408	393	403
25	339	318	331	---	---	---	462	445	456	402	390	396
26	370	340	356	---	---	---	477	464	473	413	393	399
27	385	366	374	---	---	---	472	468	470	481	417	460
28	391	285	364	---	---	---	472	466	469	481	475	478
29	347	260	307	---	---	---	466	450	461	491	481	485
30	254	234	241	---	---	---	495	462	485	492	352	455
31	---	---	---	---	---	---	477	413	449	---	---	---
MONTH	391	146	258	464	243	383	495	368	442	571	352	486
YEAR	571	116	329									

TEMPERATURE. WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	19.0	17.5	18.0	12.5	11.0	12.0	6.5	6.0	6.5	5.5	4.5	5.0
2	19.0	18.0	18.5	13.5	12.5	13.0	7.5	7.0	7.0	4.5	4.0	4.0
3	18.5	17.5	18.0	14.5	13.5	14.0	8.5	7.5	8.0	4.0	3.5	4.0
4	19.0	18.0	18.5	16.0	14.5	15.0	10.0	8.5	9.5	3.5	2.5	3.0
5	19.0	18.0	18.5	16.0	14.5	15.5	10.5	10.0	10.5	2.5	2.5	2.5
6	19.5	18.0	18.5	14.0	12.5	13.0	12.0	10.5	11.5	3.5	3.0	3.0
7	19.5	18.5	19.0	12.0	10.5	11.5	11.5	10.5	11.5	3.5	3.5	3.5
8	20.0	18.5	19.0	10.5	9.5	10.0	10.5	9.5	10.0	3.5	3.5	3.5
9	19.5	18.5	19.5	10.5	9.5	10.0	9.5	6.5	8.0	3.5	3.0	3.0
10	18.5	17.5	18.0	10.0	9.5	9.5	6.5	5.0	5.5	4.0	3.0	3.0
11	17.0	16.5	17.0	9.5	9.0	9.0	5.0	4.0	4.5	6.5	4.5	5.5
12	16.5	16.0	16.5	10.0	9.0	9.5	4.0	2.5	3.0	6.0	4.5	5.5
13	16.0	15.5	15.5	11.5	10.0	10.5	2.5	1.5	2.0	4.5	2.5	3.5
14	16.0	15.0	15.5	10.0	9.0	9.5	1.5	1.0	1.5	2.5	1.5	2.0
15	15.5	15.0	15.0	9.0	7.5	8.5	1.5	1.0	1.5	2.0	1.5	1.5
16	15.0	14.0	14.5	7.5	6.5	7.0	5.0	2.0	3.0	1.5	1.0	1.5
17	14.0	13.0	13.5	---	---	---	5.0	4.0	4.5	1.5	1.0	1.0
18	12.5	12.0	12.5	---	---	---	4.5	2.5	3.5	1.0	.0	.5
19	12.5	11.5	12.0	---	---	---	2.5	2.5	2.5	.5	.0	.0
20	13.0	11.5	12.0	---	---	---	3.0	2.5	2.5	.5	.0	.5
21	13.0	12.0	12.5	---	---	---	3.0	2.5	3.0	.5	.0	.5
22	13.0	12.0	12.5	---	---	---	3.5	2.5	3.0	.5	.0	.5
23	12.0	11.0	11.5	---	---	---	3.5	3.0	3.0	.5	.5	.5
24	11.5	10.5	11.0	10.5	9.5	---	4.0	3.0	3.5	1.0	.5	1.0
25	11.0	9.5	10.0	9.0	8.0	8.5	5.5	4.0	4.5	1.5	1.0	1.5
26	9.5	9.5	9.5	8.0	7.5	7.5	6.5	5.5	6.0	2.0	1.0	1.5
27	10.0	9.0	9.5	7.5	6.0	6.5	6.0	5.5	6.0	1.5	1.5	1.5
28	10.0	9.0	9.5	6.0	5.0	5.5	7.0	6.0	6.5	1.5	1.0	1.5
29	10.0	9.5	10.0	6.0	5.0	5.5	7.5	7.0	7.0	2.0	1.0	1.5
30	11.0	10.5	10.5	6.5	5.5	6.0	7.0	6.5	6.5	2.0	1.5	1.5
31	11.5	10.5	11.0	---	---	---	6.5	5.5	6.0	3.0	2.0	2.5
MONTH	20.0	9.0	14.5	16.0	5.0	10.0	12.0	1.0	5.5	6.5	.0	2.5

01389500 PASSAIC RIVER AT LITTLE FALLS, NJ--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	3.5	2.5	3.0	5.0	4.0	4.5	8.0	6.5	7.0	17.5	16.0	16.5
2	4.0	3.0	3.5	6.0	4.5	5.0	8.5	7.0	8.0	17.5	17.0	17.0
3	5.5	4.5	5.0	6.5	5.0	6.0	8.5	7.0	7.5	17.5	17.0	17.0
4	5.5	4.0	5.0	6.0	5.5	6.0	8.0	6.5	7.5	17.5	17.0	17.5
5	3.5	2.0	2.5	6.5	5.5	6.0	9.5	7.5	8.5	16.5	15.5	16.0
6	2.0	1.0	1.5	6.5	6.0	6.5	10.0	8.5	9.5	16.5	15.0	15.5
7	1.0	.5	1.0	6.5	6.0	6.0	10.5	9.5	10.0	16.5	15.5	16.0
8	1.5	.5	1.0	6.0	5.5	5.5	11.0	10.0	10.5	16.5	15.5	16.0
9	1.5	.5	1.0	5.5	5.0	5.0	11.5	10.0	10.5	16.0	15.0	15.5
10	1.0	.5	.5	5.5	5.0	5.5	11.0	9.0	10.0	15.5	14.0	15.0
11	.5	.0	.5	5.5	5.0	5.0	9.5	8.5	9.0	14.5	13.5	14.5
12	.0	.0	.0	5.5	5.0	5.0	10.0	9.0	9.5	14.5	13.5	14.0
13	.0	.0	.0	5.5	4.0	5.0	11.0	9.0	10.0	15.5	13.5	14.5
14	.0	.0	.0	6.5	5.0	5.5	10.5	10.0	10.0	17.0	15.5	16.0
15	.5	.0	.0	7.5	6.0	7.0	10.0	9.5	10.0	17.0	16.5	16.5
16	1.0	.5	.5	8.0	6.5	7.5	10.0	8.5	9.5	16.0	14.5	15.5
17	2.0	1.0	1.5	8.0	7.0	7.0	9.0	7.5	8.5	15.0	13.5	14.5
18	3.0	1.5	2.5	7.0	6.5	6.5	9.0	8.5	9.0	15.0	13.5	14.5
19	3.5	2.5	3.0	7.0	7.0	7.0	9.0	7.0	8.0	14.5	14.0	14.5
20	3.5	2.5	3.0	8.0	7.0	7.0	7.0	6.5	7.0	15.0	14.5	14.5
21	4.0	2.5	3.5	7.5	7.5	7.5	8.5	7.0	7.5	15.5	15.0	15.0
22	4.5	3.5	4.0	7.5	6.0	7.0	9.5	8.0	8.5	16.0	15.5	15.5
23	4.5	4.0	4.0	6.0	5.5	5.5	10.5	9.0	10.0	17.5	15.5	16.5
24	4.0	3.5	4.0	5.5	5.0	5.5	10.5	10.0	10.5	19.0	17.0	18.0
25	4.0	3.5	4.0	5.5	4.5	5.0	10.0	9.0	9.5	19.0	18.0	18.5
26	4.0	3.0	3.5	6.0	4.5	5.0	10.0	8.5	9.0	18.5	17.0	18.0
27	3.5	2.5	3.0	6.0	5.0	5.5	11.0	9.5	10.0	16.5	15.5	15.5
28	4.0	3.0	3.5	6.5	5.5	6.0	13.5	11.0	12.0	16.0	14.5	15.0
29	---	---	---	7.5	6.5	7.0	14.5	13.5	14.0	16.0	15.0	15.5
30	---	---	---	7.0	5.5	6.5	16.5	14.5	15.5	16.0	15.0	15.5
31	---	---	---	7.0	6.0	6.5	---	---	-16.0	16.0		
MONTH	5.5	.0	2.5	8.0	4.0	6.0	16.5	6.5	9.5	19.0	13.5	16.0

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	17.0	16.0	16.5	23.0	21.5	22.5	---	---	---	25.0	23.5	24.0
2	18.0	16.5	17.0	24.5	22.5	23.5	---	---	---	25.0	23.5	24.5
3	18.5	17.5	18.0	26.5	24.0	25.0	---	---	---	25.0	23.5	24.5
4	18.5	17.5	18.0	28.0	25.5	26.5	---	---	---	24.5	23.5	24.0
5	19.5	18.0	18.5	28.0	26.5	27.0	---	---	---	25.0	23.5	24.0
6	20.5	18.5	19.5	27.0	26.0	26.5	---	---	---	26.0	24.5	25.0
7	21.0	20.0	20.5	25.5	24.5	25.0	---	---	---	26.0	25.0	25.5
8	21.0	20.0	20.5	25.0	24.0	24.5	---	---	---	25.5	24.0	25.0
9	20.5	19.5	20.0	25.0	24.5	24.5	---	---	---	25.0	23.5	24.5
10	20.0	18.5	19.5	25.0	23.5	24.5	---	---	---	25.0	23.5	24.5
11	20.5	19.0	20.0	25.0	23.5	24.0	---	---	---	25.5	24.0	25.0
12	22.5	20.0	21.5	25.5	23.5	24.5	---	---	---	25.5	24.5	25.0
13	24.0	22.0	23.0	26.0	24.5	25.5	---	---	---	25.0	22.5	23.5
14	25.0	23.5	24.0	26.5	24.5	25.5	---	---	---	22.5	21.5	22.0
15	25.5	24.0	24.5	27.0	25.5	26.0	---	---	---	21.5	20.5	21.0
16	26.0	24.5	25.0	28.0	26.0	27.0	23.0	22.0	22.5	20.5	19.5	20.0
17	26.0	24.0	25.0	28.0	26.5	27.0	24.0	22.5	23.0	20.5	19.0	19.5
18	25.0	24.0	24.5	28.5	26.5	27.5	24.5	23.0	24.0	21.0	19.0	20.0
19	24.5	23.5	24.0	28.0	26.0	27.0	26.0	24.0	25.0	21.5	19.5	20.5
20	23.5	23.0	23.0	26.5	25.0	26.0	27.0	25.0	26.0	22.5	21.0	21.5
21	22.5	22.0	22.5	26.5	25.5	26.0	26.5	25.0	25.5	22.5	21.5	22.0
22	23.5	21.5	22.5	---	---	---	26.0	24.5	25.0	21.5	20.5	21.0
23	24.0	22.0	23.0	---	---	---	26.0	24.5	25.5	20.5	19.0	19.5
24	25.0	23.0	24.0	---	---	---	26.0	24.5	25.0	18.5	17.5	18.0
25	25.0	23.5	24.5	---	---	---	25.0	24.0	24.5	18.0	17.0	17.5
26	24.5	23.0	24.0	---	---	---	25.5	23.5	24.5	17.5	16.5	17.0
27	25.0	23.0	24.0	---	---	---	26.0	24.0	25.0	17.5	16.0	17.0
28	25.0	21.5	23.5	---	---	---	26.0	25.0	25.5	18.0	16.5	17.5
29	22.5	20.5	21.5	---	---	---	25.5	25.0	25.0	17.5	16.5	17.0
30	23.0	21.0	22.0	---	---	---	26.0	24.5	25.0	17.0	16.0	16.5
31	---	---	---	---	---	---	25.0	24.0	25.0	---	---	---
MONTH	26.0	16.0	22.0	28.5	21.5	25.5	27.0	22.0	25.0	26.0	16.0	21.5
YEAR	28.5	.0	12.5									

01390500 SADDLE RIVER AT RIDGEWOOD, NJ

LOCATION.--Lat 40°59'05", long 74°05'30", Bergen County, Hydrologic Unit 02030103, on left bank 15 ft upstream from bridge on State Highway 17 in Ridgewood and 2.8 mi upstream from Hohokus Brook.

DRAINAGE AREA.--21.6 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1954 to September 1974, October 1977 to current year. Operated as a maximum-stage gage water years 1975-77.

REVISED RECORDS.--WRD-NJ 1974: 1971.

GAGE.--Water-stage recorder. Datum of gage is 71.74 ft National Geodetic Vertical Datum of 1929 (levels from New Jersey Geological Survey bench mark).

REMARKS.--Water-discharge records fair. The flow past this station is affected by pumpage from wells by Hackensack Water Co. and others.

AVERAGE DISCHARGE.--26 years (water years 1955-74, 1978-83), 35.2 ft^3/s, 22.13 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,650 ft^3/s Nov. 8, 1977, gage height, 12.25 ft; minimum daily, 0.2 ft^3/s Sept. 17, 18, 1966.

EXTREMES OUTSIDE OF PERIOD OF RECORD.--Flood on July 23, 1945, reached a discharge of 6,400 ft^3/s, at site 1.6 mi upstream, drainage area, 19.1 mi^2, by slope-area measurement.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 380 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 19	0215	622	4.63	Apr. 19	2100	461	4.18
Mar. 21	1715	*1150	5.89	Apr. 25	1145	474	4.23
Mar. 28	0415	1040	5.66	May 27	0015	471	4.22
Apr. 3	1315	684	4.80	May 30	2230	803	5.13
Apr. 16	1545	1070	5.73				

Minimum discharge, 0.79 ft^3/s Sept. 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.8	4.8	10	5.8	8.8	32	68	74	57	12	6.2	3.8
2	5.4	5.5	9.3	5.6	12	117	63	69	40	11	6.0	3.3
3	5.3	5.1	8.3	5.8	119	43	305	66	37	8.8	5.4	3.2
4	5.1	6.2	8.4	5.3	29	31	115	69	135	10	5.2	2.9
5	5.1	21	8.1	7.5	18	28	83	57	50	21	4.8	3.1
6	5.2	9.2	8.4	35	15	25	73	52	39	19	4.7	2.8
7	5.4	6.4	7.8	13	21	54	70	49	47	10	4.7	3.6
8	5.5	5.9	6.8	8.8	15	92	140	50	36	9.1	4.5	3.2
9	7.8	5.8	6.8	7.3	14	99	148	48	34	8.1	4.2	2.6
10	5.9	5.5	6.2	8.8	12	86	344	43	33	7.5	4.0	2.8
11	5.5	5.7	6.4	96	10	77	175	40	31	7.2	49	1.8
12	4.8	5.8	6.3	22	19	130	107	39	29	6.7	55	4.0
13	3.9	94	6.0	13	15	70	90	38	27	6.0	17	4.4
14	4.6	23	6.1	10	14	56	82	37	24	5.5	9.0	4.8
15	4.0	12	5.9	11	13	51	82	38	22	5.3	6.9	3.7
16	4.1	9.1	32	11	13	46	537	53	21	5.1	6.1	3.0
17	4.1	8.2	19	8.7	17	43	238	57	22	4.9	5.7	2.9
18	4.2	7.5	9.6	8.0	28	118	131	37	21	4.8	6.9	2.2
19	4.2	6.9	8.2	7.3	29	381	205	35	20	6.4	5.7	1.7
20	4.9	6.6	7.6	7.1	23	110	194	44	22	7.1	5.8	1.7
21	4.5	6.3	7.0	6.9	24	381	113	38	22	35	4.6	7.0
22	4.9	6.3	6.4	6.6	33	143	97	38	18	46	4.7	38
23	4.7	6.3	5.9	45	38	92	88	112	14	9.8	5.0	4.6
24	5.0	6.0	6.3	43	37	78	243	42	14	23	4.5	2.9
25	5.3	6.0	6.4	24	31	70	292	34	12	13	4.0	2.5
26	24	5.9	6.6	15	26	64	133	72	11	9.1	3.5	2.4
27	9.2	5.9	5.9	11	22	99	103	167	11	7.9	3.6	2.4
28	6.0	6.0	5.8	9.2	21	362	92	52	37	6.6	4.9	3.0
29	5.4	37	5.9	8.3	---	100	85	45	33	6.3	6.5	3.4
30	5.0	15	5.5	8.7	---	80	79	190	14	6.7	5.1	53
31	4.9	---	5.5	13	---	72	---	131	---	6.5	4.1	---
TOTAL	179.7	354.9	254.4	487.7	676.8	3230	4575	1916	933	345.4	267.3	180.7
MEAN	5.80	11.8	8.21	15.7	24.2	104	153	61.8	31.1	11.1	8.62	6.02
MAX	24	94	32	96	119	381	537	190	135	46	55	53
MIN	3.9	4.8	5.5	5.3	8.8	25	63	34	11	4.8	3.5	1.7
CFSM	.27	.55	.38	.73	1.12	4.81	7.08	2.86	1.44	.51	.40	.28
IN.	.31	.61	.44	.84	1.17	5.56	7.88	3.30	1.61	.59	.46	.31

CAL YR 1982 TOTAL 9083.3 MEAN 24.9 MAX 310 MIN 3.9 CFSM 1.15 IN. 15.64
WTR YR 1983 TOTAL 13400.9 MEAN 36.7 MAX 537 MIN 1.7 CFSM 1.70 IN. 23.08

01391000 HOHOKUS BROOK AT HOHOKUS, NJ

LOCATION.--Lat 40°59'52", long 74°06'48", Bergen County, Hydrologic Unit 02030103, on left bank 500 ft upstream from bridge on Maple Avenue in Hohokus, and 3.5 mi upstream from mouth.

DRAINAGE AREA.--16.4 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1954 to September 1973, October 1977 to current year. Operated as a crest-stage record station, water years 1974-77.

REVISED RECORDS.--WDR NJ-77-1: 1955(M), 1968(M), 1976(M).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 120.09 ft National Geodetic Vertical Datum of 1929 (levels from New Jersey Geological Survey bench mark).

REMARKS.--Water-discharge records good except those above 100 ft^3/s, which are poor. Some regulation at low and medium flows caused by unknown sources.

AVERAGE DISCHARGE.--25 years, (water years 1955-73, 1978-83) 32.3 ft^3/s, 26.75 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,700 ft^3/s Nov. 8, 1977, gage height, 7.06 ft, from rating curve extended above 750 ft^3/s by computation of peak flow over dam; minimum, 1.9 ft^3/s Aug. 2, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 450 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 21	1315	600	3.00	Apr. 16	1100	568	2.95
Mar. 28	0015	*685	3.13	May 30	1915	500	2.84
Apr. 10	1400	512	2.86				

Minimum discharge, 6.6 ft^3/s Sept. 12, gage height, 1.26 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	13	19	14	24	40	66	64	71	22	18	14
2	13	12	19	14	38	92	56	62	57	21	21	13
3	13	13	16	14	126	46	243	59	50	19	16	12
4	13	13	17	13	50	36	136	63	140	19	15	12
5	12	34	16	18	33	35	81	54	65	34	15	12
6	12	18	17	44	28	33	69	49	51	29	16	13
7	12	14	15	23	30	54	65	49	61	20	15	12
8	12	14	14	18	27	84	124	47	44	19	14	12
9	19	14	14	16	24	94	147	47	38	19	14	12
10	12	14	13	19	22	76	237	42	36	17	14	11
11	12	13	14	144	20	71	183	41	35	17	47	11
12	12	13	14	41	26	103	100	39	32	17	61	32
13	12	86	13	26	25	59	81	38	31	15	28	19
14	13	31	13	22	23	46	74	37	30	15	18	13
15	12	20	13	22	23	41	74	39	28	15	16	12
16	12	17	45	23	24	37	332	52	27	15	16	12
17	11	16	31	20	29	35	227	55	26	14	16	12
18	11	15	19	18	37	98	129	38	26	14	19	12
19	11	15	17	17	37	266	155	36	26	18	18	12
20	11	15	17	16	32	123	171	48	30	19	16	13
21	12	14	17	16	33	241	104	40	29	49	14	35
22	12	14	15	17	38	162	86	40	26	66	14	63
23	12	14	15	52	43	87	78	117	23	21	15	19
24	12	14	17	59	42	67	182	50	22	35	14	14
25	16	13	16	38	37	59	235	39	21	23	14	13
26	36	13	16	30	33	51	133	85	19	19	13	13
27	17	13	15	24	29	98	96	163	20	17	13	13
28	14	13	15	23	29	258	82	70	50	16	20	13
29	13	46	15	21	---	94	72	64	46	16	20	13
30	13	23	15	23	---	87	68	159	25	18	14	68
31	13	---	14	29	---	106	---	150	---	18	14	---
TOTAL	419	577	526	874	962	2779	3886	1936	1185	676	578	535
MEAN	13.5	19.2	17.0	28.2	34.4	89.6	130	62.5	39.5	21.8	18.6	17.8
MAX	36	86	45	144	126	266	332	163	140	66	61	68
MIN	11	12	13	13	20	33	56	36	19	14	13	11
CFSM	.82	1.17	1.04	1.72	2.10	5.46	7.93	3.81	2.41	1.33	1.13	1.09
IN.	.95	1.31	1.19	1.98	2.18	6.30	8.81	4.39	2.69	1.53	1.31	1.21

CAL YR 1982 TOTAL 10617 MEAN 29.1 MAX 278 MIN 11 CFSM 1.77 IN. 24.08
WTR YR 1983 TOTAL 14933 MEAN 40.9 MAX 332 MIN 11 CFSM 2.49 IN. 33.87

01391200 SADDLE RIVER AT FAIR LAWN, NJ

LOCATION.--Lat 40°56'30", long 74°05'36", Bergen County, Hydrologic Unit 02030103, at bridge on Century Road in Fair Lawn, and 0.8 mi downstream from Hohokus Brook.

DRAINAGE AREA.--45.2 mi^2.

WATER-QUALITY RECORDS

PERIOD OF RECORD.--February 1979 to current year.

COOPERATION.--Analyses of fecal coliform and fecal streptococci by the MPN method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, FECAL, EC BROTH (MPN)	STREPTOCOCCI FECAL (MPN)
OCT 18...	1030	600	7.2	11.5	8.3	74	4.3	42	<2
FEB 16...	1130	740	7.7	6.0	11.0	86	1.4	13	2
MAR 24...	1300	420	7.7	6.0	11.0	88	2.1	20	20
JUN 20...	1100	533	7.7	20.5	7.0	77	7.1	--	--
JUL 21...	1130	600	7.5	25.0	7.2	86	3.0	540	240
AUG 22...	1400	580	7.6	22.0	6.5	74	2.7	200	<200

DATE	HARDNESS (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)
OCT 18...	190	47	18	53	6.1	112	43	79	<.10
FEB 16...	180	47	14	60	5.2	129	52	86	.10
MAR 24...	120	33	8.2	31	2.2	72	29	52	<.10
JUN 20...	170	46	13	39	3.7	103	38	59	.10
JUL 21...	170	44	14	41	5.5	102	45	71	.20
AUG 22...	170	45	14	45	5.0	110	40	74	<.10

DATE	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHATE, TOTAL (MG/L AS PO4)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 18...	14	384	.640	5.30	4.10	5.1	10	4.40	7.6
FEB 16...	13	408	.270	4.20	3.00	4.7	8.9	5.00	7.0
MAR 24...	11	273	.050	2.20	.990	1.8	4.0	E.94	5.1
JUN 20...	13	306	.550	3.50	3.00	E3.6	--	3.30	7.1
JUL 21...	13	340	.640	4.60	2.70	3.0	7.6	5.21	7.7
AUG 22...	13	357	.510	5.20	1.50	2.2	7.4	5.21	6.1

01391200 SADDLE RIVER AT FAIR LAWN, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
OCT 18...	1030	20	3	<10	--	1	10	18
JUN 20...	1100	<10	2	<10	140	1	20	12

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
OCT 18...	390	5	70	.2	3	<1	30	1
JUN 20...	410	11	110	<.1	4	<1	130	<1

01391500 SADDLE RIVER AT LODI, NJ

LOCATION.--Lat 40°53'25", long 74°04'51", Bergen County, Hydrologic Unit 02030103, on left bank 560 ft upstream from bridge on Outwater Lane in Lodi and 3.2 mi upstream from mouth. Water-quality samples collected at bridge on Outwater Lane at high flows.

DRAINAGE AREA.--54.6 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1923 to current year.

PERIOD RECORDS.--WSP 781: Drainage area. WSP 1031: 1940(M). WSP 1552: 1929(M), 1936(M), 1938. WRD-NJ 1969: 1967. WRD-NJ 1970: 1968, 1969.

GAGE.--Water-stage recorder. Concrete control since Nov. 2, 1938. Datum of gage is 25.00 ft National Geodetic Vertical Datum of 1929. Prior to Nov. 2, 1938, at site 560 ft downstream at datum 2.54 ft lower.

REMARKS.--Water-discharge records fair. Occasional regulation at low flow by mills above station. Diversion above station by Hackensack Water Co., for municipal supply (records given herein).

AVERAGE DISCHARGE.--60 years, 100 ft³/s, 24.87 in/yr, adjusted for diversion since 1966.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,500 ft³/s Nov. 9, 1977, gage height, 12.36 ft, from high-water mark in gage house; minimum, 1.0 ft³/s May 25, 1938, gage height, 1.03 ft, site and datum then in use; minimum daily, 6.0 ft³/s Aug. 23, 1934.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,200 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Mar. 19	0515	1430	5.04	Apr. 16	2030	*2550	7.50
Mar. 28	0645	1800	5.71	May 31	0045	1460	5.08
Apr. 3	1245	1560	5.26	Aug. 11	2045	1400	4.98
Apr. 10	1730	2000	6.16				

Minimum discharge, 11 ft³/s Feb. 11, 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	34	26	35	24	36	75	169	169	219	50	37	29
2	30	25	31	25	40	247	146	176	161	49	38	29
3	27	24	26	27	315	103	868	180	141	44	37	29
4	28	25	27	24	108	68	426	190	465	43	33	28
5	26	81	26	35	59	73	239	159	211	56	33	30
6	25	35	30	124	48	58	196	143	155	80	41	31
7	26	28	26	44	52	128	182	134	170	43	36	31
8	25	30	24	32	47	224	405	131	135	42	34	29
9	35	28	24	31	40	271	546	137	114	39	32	27
10	28	27	24	38	37	218	1060	119	103	37	30	27
11	24	27	27	322	30	202	608	113	95	44	260	24
12	24	27	26	83	52	311	338	107	89	41	274	36
13	26	269	25	43	48	169	260	105	85	41	71	52
14	29	72	24	36	40	126	220	100	67	39	43	28
15	25	38	24	39	39	112	212	113	64	37	38	26
16	24	30	109	42	42	100	1490	145	61	36	37	24
17	24	26	66	34	57	96	991	175	59	35	37	25
18	23	26	30	31	83	232	445	103	60	37	41	25
19	23	26	27	25	82	1090	586	93	65	54	37	23
20	23	27	26	31	65	359	671	123	72	46	35	21
21	24	28	25	29	65	1040	367	116	69	153	32	66
22	23	27	28	29	78	559	285	108	58	253	35	188
23	23	25	25	153	85	266	247	372	50	47	36	35
24	24	26	28	146	83	203	638	167	50	77	34	26
25	31	26	25	81	69	176	817	104	45	52	32	23
26	86	26	25	52	59	156	403	147	41	40	31	24
27	32	25	25	40	51	232	279	586	42	38	29	23
28	23	26	24	37	49	1100	232	210	188	37	81	19
29	24	137	25	34	---	310	201	176	161	37	64	19
30	27	45	24	40	---	219	184	406	59	38	44	288
31	26	---	24	55	---	237	---	587	---	36	30	---
TOTAL	872	1288	935	1786	1859	8760	13711	5694	3354	1701	72	1285
MEAN	28.1	42.9	30.2	57.6	66.4	283	457	184	112	54.9	53.9	42.8
MAX	86	269	109	322	315	1100	1490	587	465	253	274	288
MIN	23	24	24	24	30	58	146	93	41	35	29	19
(†)	.2	7.3	11.3	13.6	20.6	5.5	0	0	8.4	9.1	4.5	3.5
MEAN‡	28.3	50.2	41.5	71.2	87.0	288	457	184	120	64.0	58.4	46.3
CFSM‡	.52	.92	.76	1.30	1.59	5.27	8.37	3.37	2.20	1.17	1.07	.85
IN.‡	.60	1.03	.88	1.50	1.66	6.08	9.34	3.89	2.45	1.35	1.23	.95

CAL YR 1982 TOTAL 28755 MEAN 78.8 MAX 1080 MIN 23 MEAN‡ 83.8 CFSM‡ 1.55 IN.‡ 20.85
WTR YR 1983 TOTAL 42917 MEAN 118 MAX 1490 MIN 19 MEAN‡ 125 CFSM‡ 2.28 IN.‡ 30.96

† Diversion, equivalent in cubic feet per second, above station by Hackensack Water Co. Records of diversion furnished by Hackensack Water Co.

‡ Adjusted for diversion.

01391500 SADDLE RIVER AT LODI, NJ--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1962 to current year.

COOPERATION.--Analyses of fecal coliform and fecal streptococci by the MPN method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
OCT 18...	1230	20	760	7.2	10.0	6.7	58	7.1	--	--
FEB 16...	1300	36	740	7.5	6.0	10.6	83	1.7	<20	<20
MAR 24...	1100	196	440	7.6	5.5	11.2	88	3.1	<20	<20
JUN 14...	1100	60	558	7.8	23.0	6.8	79	4.8	--	--
JUL 21...	1300	39	640	7.4	25.0	6.9	83	3.8	3300	200
AUG 22...	1200	31	600	7.7	21.5	6.1	69	3.0	4600	2300

DATE	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 18...	210	51	19	53	5.9	115	54	86	<.10
FEB 16...	180	47	15	62	5.2	136	50	88	.10
MAR 24...	130	36	8.6	30	2.2	78	35	51	<.10
JUN 14...	180	50	14	40	3.7	117	44	64	.10
JUL 21...	180	50	14	41	4.5	120	46	74	.20
AUG 22...	190	52	5	43	4.3	126	42	74	<.10

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHATE, TOTAL (MG/L AS PO4)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 18...	14	397	.590	3.70	4.40	5.3	9.0	4.70	6.7
FEB 16...	14	379	.270	4.10	3.60	5.2	9.3	4.90	6.7
MAR 24...	11	259	.050	2.20	.780	1.6	3.8	E.88	5.0
JUN 14...	13	353	.530	3.20	1.70	2.5	5.7	.63	5.8
JUL 21...	13	352	.550	4.00	2.10	2.1	6.1	2.98	6.0
AUG 22...	12	348	.360	3.60	1.20	2.1	5.7	3.68	4.7

01391500 SADDLE RIVER AT LODI, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	NITROGEN,NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	CARBON, INORGANIC, TOT IN BOT MAT (G/KG AS C)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (G/KG AS C)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)
OCT											
18...	1230	370	.4	4.1	50	2	<1	10	200	<1	<1

DATE	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)
OCT											
18...	10	4	<10	14	10	230	910	6	50	80	44

DATE	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY RECOV. FM BOTTOMCMATERIAL (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	NICKEL, RECOV. FM BOTTOM MATERIAL (UG/G AS NI)	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	PHENOLS TOTAL (UG/L)	PCB, TOTAL IN BOTTOM MATERIAL (UG/KG)	PCN, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT											
18...	.2	<.01	3	<10	<1	<1	30	30	9	4	<1.0

DATE	ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDD, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDT, TOTAL IN BOTTMOM MATERIAL (UG/KG)	DIAZINON, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDOSULFAN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ETHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT											
18...	<.1	20	5.0	2.3	1.1	<.1	.9	<.1	<.1	<.1	<.1

DATE	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)	MALATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	METHOXYCHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARATHION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRITHION, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL IN BOTTOM MATERIAL (UG/KG)	PARATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	PERTHANE IN BOTTOM MATERIL (UG/KG)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)	TRITHION, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT											
18...	<.1	<.1	<.1	<.1	<.1	<.1	<.1	<.1	<1.00	<10	<.1

01392210 THIRD RIVER AT PASSAIC, NJ

LOCATION.--Lat 40°49'47", long 74°08'32", Passaic County, Hydrologic Unit 02030103, on right bank 400 ft upstream from bridge on State Highway 3, 0.8 mi south of Passaic, 1.2 mi upstream from Passaic River.

DRAINAGE AREA.--11.8 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1977 to current year.

GAGE.--Water-stage recorder. Datum of gage is 22.15 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records fair. Some regulation from ponds upstream.

AVERAGE DISCHARGE.--6 years, 22.0 ft³/s, 25.32 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,300 ft³/s Nov. 8, 1977, gage height, 8.25 ft, from rating curve extended above 300 ft³/s) on basis of contracted-opening measurement of peak flow; minimum, 0.84 ft³/s July 3, 1981, gage height, 1.39 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 550 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Mar. 18	2145	750	5.00	Apr. 16	1100	940	5.47
Mar. 21	1145	781	5.08	July 21	2145	720	4.93
Mar. 27	2345	687	4.85	Aug. 11	1945	*1240	6.13
Apr. 3	0915	773	5.06	Aug. 28	2030	979	5.56
Apr. 10	1400	902	5.38				

Minimum discharge, 4.5 ft³/s Oct. 22-24, gage height, 1.76 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.8	5.4	16	6.4	8.7	27	18	24	21	9.7	7.6	8.0
2	5.8	5.4	10	6.9	12	54	17	23	18	8.8	9.6	7.8
3	5.2	5.2	7.9	6.4	64	14	254	23	17	8.1	7.2	7.4
4	4.8	5.2	7.7	5.8	12	12	42	32	61	7.9	6.9	7.2
5	5.2	17	8.1	18	9.7	14	29	21	18	9.4	6.9	7.2
6	5.2	7.0	9.1	42	9.3	11	24	20	16	8.3	6.4	7.2
7	5.2	6.1	7.8	7.5	11	37	24	18	20	7.0	6.4	7.0
8	5.2	6.2	7.0	7.1	9.8	80	91	17	15	7.3	6.3	6.7
9	5.6	5.8	7.7	6.7	9.1	38	54	18	13	7.2	6.3	6.4
10	6.2	5.7	11	25	8.7	73	271	17	14	7.2	6.2	6.2
11	5.2	5.6	7.0	99	8.9	35	60	16	12	7.3	228	6.1
12	4.8	5.7	7.0	9.8	12	73	39	16	13	7.2	97	18
13	5.2	54	6.6	8.2	9.9	23	30	16	11	6.7	18	13
14	5.4	23	6.1	7.9	8.8	18	26	15	10	6.6	12	7.3
15	5.4	8.0	6.6	9.3	9.7	16	24	23	10	6.7	11	7.1
16	5.2	6.6	48	11	12	14	352	31	9.7	6.8	9.4	7.1
17	5.0	5.6	9.6	8.3	18	13	75	24	9.7	6.3	8.9	6.7
18	4.7	5.2	7.3	6.9	24	162	46	15	10	7.0	39	6.9
19	5.0	5.3	7.5	6.9	16	106	88	15	41	24	27	6.6
20	5.0	5.5	7.3	6.7	13	29	60	24	22	13	8.8	6.4
21	6.4	5.5	6.7	6.9	14	205	41	20	15	123	7.9	49
22	4.5	5.3	6.8	6.8	17	42	34	26	9.9	48	7.7	38
23	4.5	5.9	7.1	64	16	27	34	55	9.3	9.5	7.1	7.9
24	4.5	5.9	9.5	28	14	22	111	21	9.0	16	6.9	7.0
25	15	6.8	7.2	14	12	20	107	16	8.2	9.3	6.8	7.2
26	19	7.0	7.6	10	11	17	42	27	8.1	8.6	6.7	7.1
27	5.8	6.5	7.4	9.1	10	85	35	46	8.7	8.2	6.6	7.6
28	5.2	9.9	7.0	8.7	9.7	143	31	17	117	7.7	124	7.2
29	5.2	63	6.6	8.5	---	37	28	29	29	7.5	38	6.6
30	5.4	8.1	6.5	15	---	24	26	79	11	7.5	9.1	64
31	5.4	---	6.1	14	---	20	---	34	---	8.1	8.5	---
TOTAL	186.0	317.4	283.8	490.8	390.3	1491	2113	778	586.6	425.9	758.2	357.9
MEAN	6.00	10.6	9.15	15.8	13.9	48.1	70.4	25.1	19.6	13.7	24.5	11.9
MAX	19	63	48	99	64	205	352	79	117	123	228	64
MIN	4.5	5.2	6.1	5.8	8.7	11	17	15	8.1	6.3	6.2	6.1

CAL YR 1982 TOTAL 5572.1 MEAN 15.3 MAX 580 MIN 4.5
WTR YR 1983 TOTAL 8178.9 MEAN 22.4 MAX 352 MIN 4.5

RESERVOIRS IN PASSAIC RIVER BASIN

01379990 SPLITROCK RESERVOIR.--Lat 40°57'40", long 74°27'45", Morris County, Hydrologic Unit 02030103, at dam on Beaver Brook, 2 mi northeast of Hibernia, NJ. DRAINAGE AREA, 5.50 mi^2. PERIOD OF RECORD, September 1925 to September 1931, December 1948 to September 1950, October 1953 to current year. Monthend contents only 1925-31, 1948-50, published in WSP 1302. October 1950 to September 1953 in Special Report 16, New Jersey Department of Environmental Protection. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

Reservoir is formed by a concrete gravity dam with earth embankment; present dam constructed 1946-48 and sluice gate first closed Dec. 22, 1948. Prior to 1946, reservoir was formed by earthfill dam with crest about 20 ft lower. Capacity of spillway level, 3,310,000,000 gal, elevation, 835 ft. Flow is regulated by two 30-inch sluice gates. Flow is released for diversion for municipal supply of Jersey City. Records furnished by Jersey City, Bureau of Water.

EXTREMES FOR PERIOD OF RECORD: Maximum contents, 3,652,500,000 Apr. 5, 1973, elevation, 836.75 ft; minimum 1,522,800,000 gal Jan. 4, 1954, elevation, 824.20 ft.

EXTREMES FOR CURRENT YEAR: Maximum contents, 3,484,200,000 gal Mar. 20, elevation, 835.90 ft; minimum, 3,187,200,000 gal Sept. 21, elevation, 834.40 ft.

01380900 BOONTON RESERVOIR.--Lat 40°53'. long 74°24', Morris County, Hydrologic Unit 02030103, at dam on Rockaway River at Boonton, NJ. DRAINAGE AREA, 119 mi^2. PERIOD OF RECORD, April 1904 to September 1950, October 1953 to current year. Monthend contents only 1904-50, published in WSP 1302. October 1950 to September 1953 in Special Report 16, New Jersey Department of Environmental Protection. GAGE, hook gage. Datum of gage is National Geodetic Vertical Datum of 1929.

Reservoir is formed by a cyclopean masonry dam with earth wings; dam completed and storage began in 1904. Total capacity at spillway level, 7,620,000,000 gal elevation, 305.25 ft of which 7,366,000,000 gal is usable contents above elevation 259.75 ft, sill of lowest outlet gate. Flow regulated by flashboards, 3 outlets in gatehouse at head of conduit and by two 48-inch pipes (bottom of sluice pipes at elevation 205 ft). Water is diverted from reservoir for municipal supply of Jersey City. Records furnished by Jersey City, Bureau of Water.

EXTREMES FOR PERIOD OF RECORD: Maximum contents, 8,413,000,000 gal May 13, 1981, elevation, 308.30 ft; minimum, 1,445,000,000 gal Jan. 31, 1981, elevation 274.71 ft.

EXTREMES FOR CURRENT YEAR: Maximum contents, 8,340,000,000 gal May 27, elevation, 308.02 ft; minimum, 6,059,000,000 gal Sept. 30, elevation, 299.08 ft.

01382100 CANISTEAR RESERVOIR.--Lat 41°06'30", long 74°29'30", Sussex County, Hydrologic Unit 02030103, at dam on Pacock Brook, 1.8 mi northeast of Stockholm, NJ. DRAINAGE AREA, 5.6 mi^2. PERIOD OF RECORD, October 1923 to September 1950, October 1953 to current year. Monthend contents 1923-50, published in WSP 1302. October 1950 to September 1953 in Special Report 16, New Jersey Department of Environmental Protection. GAGE, staff gage. Datum of gage is National Geodetic Vertical Datum of 1929.

Reservoir is formed by earth-embankment type dam, completed about 1896. Capacity at spillway level, 2,407,000,000 gal, elevation, 1,086.0 ft. Reservoir used for storage and water released for diversion at Macopin intake dam on Pequannock River prior to May 21, 1961, and for diversion at Charlotteburg Reservoir on Pequannock River since May 21, 1961, for municipal supply for City of Newark. Outflow is controlled mostly by operation of gates in pipes through dam. Records furnished by City of Newark, Division of Water Supply.

01382200 OAK RIDGE RESERVOIR.--Lat 41°02'30", long 74°30'10", Passaic County, Hydrologic Unit 02030103, at dam on Pequannock River, 0.9 mi southwest of Oak Ridge, NJ. DRAINAGE AREA, 27.3 mi^2. PERIOD OF RECORD, October 1923 to September 1950, October 1953 to current year. Monthend contents only 1924-50, published in WSP 1302. October 1950 to September 1953 in Special Report 16, New Jersey Department of Environmental Protection. GAGE, staff gage. Datum of gage is National Geodetic Vertical Datum of 1929.

Reservoir is formed by earthfill dam with concrete-core wall and ogee overflow section; dam constructed between 1880-92; dam raised 10 ft during 1917-19. Capacity at spillway level, 3,895,000,000 gal, elevation, 846.0 ft. Reservoir used for storage and water released for diversion at Macopin intake dam on Pequannock River prior to May 21, 1961, and diversion at Charlotteburg Reservoir on Pequannock River since May 21, 1961, for municipal supply of City of Newark. Outflow is controlled mostly by operation of gates in pipes through dam. Records furnished by City of Newark, Division of Water Supply.

01382300 CLINTON RESERVOIR.--Lat 41°04'30", long 74°27'00", Passaic County, Hydrologic Unit 02030103, at dam on Clinton Brook, 2.0 mi north of Newfoundland, NJ. DRAINAGE AREA, 10.5 mi^2. PERIOD OF RECORD, October 1923 to September 1950, October 1953 to current year. Monthend contents only 1923-50, published in WSP 1302. October 1950 to September 1953 in Special Report 16, New Jersey Department of Environmental Protection. GAGE, staff gage. Datum of gage is National Geodetic Vertical Datum of 1929.

Reservoir is formed by earthfill dam constructed between 1889-92. Capacity at spillway level, 3,518,000,000 gal, elevation, 992.0 ft. Reservoir used for storage and water released for diversion at Macopin intake dam on Pequannock River prior to May 21, 1961, and for diversion at Charlotteburg Reservoir since May 21, 1961, for municipal supply of City of Newark. Outflow is controlled mostly by operation of gates in pipes through dam. Records furnished by City of Newark, Division of Water Supply.

01382380 CHARLOTTEBURG RESERVOIR.--Lat 41°01'34", long 74°25'30", Passaic County, Hydrologic Unit 02030103, at dam on Pequannock River, 1.1 mi upstream from Macopin River, and 1.5 mi southeast of Newfoundland, NJ. DRAINAGE AREA, 56.2 mi^2. PERIOD OF RECORD, May 1961 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

Reservoir is formed by concrete-masonry dam and earth embankment, with concrete spillway at elevation 738.00 ft; storage began May 19, 1961. Spillway equipped with Bascule gate 5 ft high. Capacity, 2,964,000,000 gal, elevation, 743.00 ft, top to Bascule gate. No dead storage. Outflow is controlled by sluice and automatic Bascule gates. Water diverted from reservoir since May 21, 1961, for municipal supply of City of Newark. Records furnished by City of Newark, Division of Water Supply.

REVISION.--WRD-NJ 1974: Station number.

RESERVOIRS IN PASSAIC RIVER BASIN--Continued

01382400 ECHO LAKE.--Lat 41°03'00", long 74°24'30", Passaic County, Hydrologic Unit 02030103, at Echo Lake Dam on Macopin River, 1.6 mi north of Charlotteburg, NJ, and 1.9 mi upstream from mouth. DRAINAGE AREA, 4.35 mi^2. PERIOD OF RECORD, October 1927 to September 1950, October 1953 to current year. Monthend contents only 1928-50, published in WSP 1302. October 1950 to September 1953 in Special Report 16, New Jersey Department of Environmental Protection. GAGE, staff gage. Datum of gage is National Geodetic Vertical Datum of 1929.

Lake is formed by earth-embankment type dam completed about 1925. Capacity at spillway level, 1,583,000,000 gal, elevation, 893.0 ft, with provision for additional storage of 180,000,000 gal at elevation 894.9 ft with flashboards. Usable contents, 1,045,000,000 gal above elevation 880.0 ft. Lake used for storage and water released for diversion at Macopin intake dam on Pequannock River prior to May 21, 1961, and water diverted to Charlotteburg Reservoir on Pequannock River since May 21, 1961, for municipal supply of City of Newark. Outflow to Macopin River controlled by operation of gates in gatehouse at dam and water released through pipe and canal to Charlotteburg Reservoir. Records furnished by City of Newark, Division of Water Supply.

01383000 GREENWOOD LAKE.--Lat 41°09'36", long 74°20'03", Passaic County, Hydrologic Unit 02030103, in gatehouse near right end of Greenwood Lake Dam on Wanaque River at Awosting. DRAINAGE AREA, 27.1 mi^2. PERIOD OF RECORD, June 1898 to November 1903, June 1907 to current year (gage heights only prior to October 1953). GAGE, water-stage recorder. Datum of gage is 608.86 ft National Geodetic Vertical Datum of 1929 (levels from New Jersey Geological Survey bench mark). Prior to Oct. 1, 1931, staff gage on former railroad bridge at site 100 ft upstream at datum 89.75 ft lower.

Reservoir is formed by earthfill dam with concrete spillway; dam completed about 1837 and reconstruction completed in 1928 with crest of spillway 0.25 ft lower. Usable capacity, 6,860,000,000 gal between gage heights -4.00 ft, sill of gate, and 10.00 ft, crest of spillway. Dead storage, 7,140,000,000 gal. Outflow mostly regulated by two gates, 3.5 by 5.0 ft. Records given herein represent usable capacity. Lake used for recreation.

EXTREMES FOR PERIOD OF RECORD: Maximum contents, 9,528,000,000 gal Oct. 9-14, 1903, gage height, 14.25 ft, present datum; minimum, 3,160,000,000 gal several days in November 1900, gage height, 3.50 ft, present datum.

EXTREMES FOR CURRENT YEAR: Maximum contents, 7,713,000,000 gal Apr. 17, gage height, 11.37 ft; minimum, 6,482,000,000 gal Sept. 21, gage height, 9.38 ft.

01386990 WANAQUE RESERVOIR.--Lat 41°02'33", long 74°17'36", Passaic County, Hydrologic Unit 02030103, at Raymond Dam on Wanaque River at Wanaque. DRAINAGE AREA, 90.4 mi^2. PERIOD OF RECORD, February 1928 to September 1950, October 1953 to current year. Monthend contents only 1928-50, published in WSP 1302. October 1950 to September 1953 in Special Report 16, New Jersey Department of Environmental Protection. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by North Jersey District Water Supply Commission).

Reservoir is formed by earthfill with concrete-core wall main dam and seven secondary dams; dams completed in 1927 and storage began in March 1928. Total capacity of spillway level, 27,210,000,000 gal elevation, 300.3 ft. Capacity available by gravity at spillway level, 26,230,000,000 gal. Outflow mostly controlled by sluice gates in intake conduits in gage house. Water is diverted from reservoir for municipal supply. Diversion to reservoir from Post Brook and Ramapo River (see Passaic River Basin, diversions). Records furnished by North Jersey District Water Supply Commission.

EXTREMES FOR PERIOD OF RECORD: Maximum contents, 30,814,000,000 gal Mar. 31, 1951, elevation, 303.93 ft; minimum, 5,110,000,000 gal Dec. 26, 1964, elevation, 256.06 ft.

EXTREMES FOR CURRENT YEAR: Maximum contents, 30,544,000,000 gal Apr. 17, elevation, 303.58 ft; minimum, 19,198,000,000 gal Dec. 16, elevation, 287.44 ft.

MONTHEND ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

Date	Elevation (feet)	Contents (million gallons)	Change in contents (equivalent in ft^3/s)	Elevation (feet)	Contents (million gallons)	Change in contents (equivalent in ft^3/s)	Elevation (feet)	Contents (million gallons)	Change in contents (equivalent in ft^3/s)
	01379990	SPLITROCK RESERVOIR *		01380900	BOONTON RESERVOIR *		01382100	CANISTEAR RESERVOIR †	
Sept. 30	834.85	3,276	-	305.88	7,784	-	1,086.20	2,427	-
Oct. 31	834.70	3,247	-1.5	302.85	7,000	-39.1	1,086.20	2,427	0
Nov. 30	835.10	3,326	+4.1	304.86	7,519	+26.8	1,086.30	2,437	+.5
Dec. 31	835.05	3,316	-.5	305.31	7,636	+5.8	1,086.20	2,427	-.5
CAL YR 1982	-	-	+2.1	-	-	+7.6	-	-	+3.4
Jan. 31	835.10	3,326	+.5	305.44	7,669	+1.6	1,086.20	2,427	0
Feb. 29	835.05	3,316	-.5	305.66	7,727	+3.2	1,086.20	2,427	0
Mar. 31	835.30	3,365	+2.5	306.15	7,854	+6.3	1,086.30	2,437	+.5
Apr. 30	835.25	3,356	-.5	306.00	7,815	-2.0	1,086.40	2,447	+.5
May 31	835.50	3,405	+2.5	307.88	8,304	-24.4	1,086.30	2,437	-.5
June 30	835.15	3,336	-3.6	307.52	8,210	-4.8	1,086.30	2,437	0
July 31	834.90	3,286	-2.5	305.19	7,604	-30.2	1,086.10	2,417	-1.0
Aug. 31	834.70	3,247	-2.0	303.48	7,161	-22.1	1,086.10	2,417	0
Sept. 30	834.35	3,177	-3.6	299.08	6,059	-56.8	1,085.75	2,376	-2.1
WTR YR 1983	-	-	-.4	-	-	-7.3	-	-	-.2

RESERVOIRS IN PASSAIC RIVER BASIN--Continued

MONTHEND ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

Date	Elevation (feet)	Contents (million gallons)	Change in contents (equivalent in ft^3/s)	Elevation (feet)	Contents (million gallons)	Change in contents (equivalent in ft^3/s)	Elevation (feet)	Contents (million gallons)	Change in contents (equivalent in ft^3/s)
	01382200	OAK RIDGE RESERVOIR †		01382300	CLINTON RESERVOIR †		01382380	CHARLOTTEBURG RESERVOIR †	
Sept. 30	834.70	2,390	-	987.40	2,920	-	732.35	1,868	-
Oct. 31	830.50	1,902	-24.4	983.20	2,399	-26.0	732.00	1,837	-1.5
Nov. 30	827.70	1,604	-15.4	983.20	2,399	0	732.35	1,869	+1.6
Dec. 31	825.00	1,346	-12.9	983.00	2,376	-1.1	733.40	1,961	+4.7
CAL YR 1982	-	-	+2.2	-	-	+3.1	-	-	+1.3
Jan. 31	833.40	2,234	+44.3	986.20	2,755	+18.9	730.00	1,666	-14.8
Feb. 29	842.00	3,339	+61.1	989.70	3,224	+25.9	728.00	1,500	-9.2
Mar. 31	846.30	3,938	+29.9	992.30	3,556	+16.6	743.20	2,989	+74.3
Apr. 30	846.40	3,953	+.7	992.30	3,556	0	743.40	3,014	+1.3
May 31	846.30	3,938	-.7	992.40	3,569	+.6	743.25	3,008	+.3
June 30	846.10	3,909	-1.5	992.10	3,531	-2.0	737.25	2,329	-35.0
July 31	838.50	2,875	-51.6	991.80	3,492	-1.9	732.75	1,902	-21.3
Aug. 31	833.40	2,234	-32.0	984.00	2,490	-50.0	731.55	1,798	-5.2
Sept. 30	820.00	928	-67.3	940.40	2,101	-20.0	730.10	1,675	-6.4
WTR YR 1983	-	-	-6.2	-	-	-3.5	-	-	-.8

Date	Elevation (feet)	Contents (million gallons)	Change in contents (equivalent in ft^3/s)	Gage height	Contents (million gallons)	Change in contents (equivalent in ft^3/s)	Elevation (feet)	Contents (million gallons)	Change in contents (equivalent in ft^3/s)
	01382400	ECHO LAKE †		01383000	GREENWOOD LAKE **		01386990	WANAQUE RESERVOIR †	
Sept. 30	893.00	1,583	-	10.05	6,891	-	295.25	24,345	-
Oct. 31	892.90	1,574	-0.5	9.89	6,793	-4.9	291.04	21,505	-141.7
Nov. 30	893.10	1,592	+1.0	10.18	6,972	+9.2	288.60	19,926	-81.4
Dec. 31	893.20	1,601	+.5	e10.22	6,996	+1.2	288.97	20,156	+11.5
CAL YR 1982	-	-	+3.1	-	-	+.2	-	-	+25.8
Jan. 31	893.10	1,592	-.4	10.24	7,009	+.6	294.71	23,974	+190.6
Feb. 29	893.00	1,583	-.5	10.28	7,034	+1.4	299.27	27,233	+180.1
Mar. 31	893.30	1,611	+1.4	10.58	7,220	+9.3	302.88	30,004	+138.3
Apr. 30	893.30	1,611	0	10.53	7,189	-1.6	302.87	29,997	-.4
May 31	893.30	1,611	0	10.41	7,114	-3.7	302.93	30,042	+2.2
June 30	893.00	1,583	-1.4	10.10	6,922	-9.9	301.20	28,708	-68.8
July 31	893.10	1,592	+.4	9.85	6,768	-7.7	297.34	25,825	-143.9
Aug. 31	892.90	1,573	-.9	9.74	6,701	-3.3	293.75	23,316	-125.2
Sept. 30	892.60	1,546	-1.4	9.52	6,567	-6.9	289.75	20,666	-136.6
WTR YR 1983	-	-	-.2	-	-	-1.4	-	-	-15.6

e Gage height estimated.
* Elevation at 0900.
** Gage height at 2400.
† Elevation at 0800 on first day of following month.

DIVERSIONS IN PASSAIC RIVER BASIN

01379510 Commonwealth Water Company diverts water from Passaic River, 1.2 mi upstream from Canoe Brook for municipal supply. These figures also include water diverted from the Passaic River by the Bernards Division of the Commonwealth Water Company. Records furnished by Commonwealth Water Company.

01379530 Commonwealth Water Company diverts water from Canoe Brook near Summit, 0.5 mi from mouth, for municipal supply. Records furnished by Commonwealth Water Company.

01380800 Jersey City diverts water from Boonton Reservoir on Rockaway River at Boonton for municipal supply. Records furnished by Jersey City, Bureau of Water.

01382370 City of Newark diverts water from Charlotteburg Reservoir on Pequannock River since May 21, 1961 for municipal supply. Prior to May 21, 1961 water was diverted from reservoir formed by Macopin intake dam on Pequannock River (former diversion 01382490). Records furnished by City of Newark, Division of Water Supply.
REVISED RECORDS.--WDR NJ-82-1: Station number.

01386980 North Jersey District Water Supply Commission diverts water for municipal supply from Wanaque Reservoir on Wanaque River. Records furnished by North Jersey District Water Supply Commission.

01387020 North Jersey District Water Supply Commission diverts water from Post Brook near Wanaque into Wanaque Reservoir. Records no longer available.

01387990 North Jersey District Water Supply Commission diverts water from Ramapo River by pumping from Pompton Lakes into Wanaque Reservoir. Records furnished by North Jersey District Water Supply Commission.

01388490 Passaic Valley Water Commission supplements the dependable yield of its supply at Little Falls by diverting water at high flows at the Jackson Avenue Pumping Station into Point View Reservoir on Haycock Brook for release as required to sustain minimum flow requirements. Also water may be released into Haycock Brook for maintenance of flow in that stream. These diversions and releases occur upstream of Pompton Plains gaging station. Records furnished by Passaic Valley Water Commission. No diversion or release during the year.
REVISED RECORDS.--WDR NJ-82-1: Station number.

01389490 The Passaic Valley Water Commission diverts water from Passaic River above Beattie's Dam at Little Falls for municipal supply. Records furnished by Passaic Valley Water Commission.

DIVERSIONS, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

MONTH	COMMONWEALTH WATER COMPANY FROM PASSAIC RIVER 01379510	COMMONWEALTH WATER COMPANY FROM CANOE BROOK 01379530	JERSEY CITY 01380800	NEWARK 01382370	FROM WANAQUE RESERVOIR 01386980	FROM RAMAPO RIVER TO WANAQUE RESERVOIR 01387990	PASSAIC VALLEY WATER COMMISSION 01389490
October......	0.40	0.93	83.7	72.5	147	0	74.8
November.....	13.8	4.00	76.4	83.2	133	0	71.7
December.....	12.1	3.20	72.9	85.3	123	0	72.4
CAL YR 1982..	10.1	3.27	65.1	98.2	133	30.1	74.5
January......	57.6	8.82	81.3	95.5	141	0	66.7
February.....	67.5	3.54	80.2	91.5	130	0	74.3
March........	10.7	6.22	74.8	111.4	114	0	74.4
April........	3.28	.37	71.4	102.1	115	0	75.0
May..........	3.28	0	73.6	109.8	121	0	75.1
June.........	3.28	4.58	82.6	121.4	143	0	78.3
July.........	3.28	1.00	83.5	121.7	152	0	77.8
August.......	3.28	4.13	83.3	115.8	138	0	100.3
September....	3.29	1.93	84.3	111.3	138	0	100.6
WTR YR 1983..	14.8	3.23	79.0	101.9	133	0	78.4

01393450 ELIZABETH RIVER AT URSINO LAKE, AT ELIZABETH, NJ

LOCATION.--Lat 40°40'30", long 74°13'20", Union County, Hydrologic Unit 02030104, on left bank at Ursino Lake Dam in Elizabeth, 75 ft upstream of bridge on Trotters Lane and 3.8 mi upstream from mouth.

DRAINAGE AREA.--16.9 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1921 to current year.

REVISED RECORDS.--WSP 1552: Drainage area, 1922-23, 1927-29(M), 1932, 1933-34(M), 1938(P), 1942(M) 1944(P), 1945(M), 1948(P), 1952-53(M).

GAGE.--Water-stage recorder and concrete control. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to Oct. 1, 1922, nonrecording gage at site 2,800 ft downstream at datum 4.14 ft higher and Oct. 1, 1922 to May 18, 1923, at same site at datum 5.23 ft higher. May 19, 1923 to Dec. 27, 1972, at site 2,800 ft downstream at datum 5.23 ft higher and published as "Elizabeth River at Elizabeth" (station 01393500).

REMARKS.--Water-discharge records fair. Diversion by pumpage from Hammock Well Field in Union, for municipal supply by Elizabethtown Water Co., probably reduces the flow past the station.

AVERAGE DISCHARGE.--62 years, 25.7 ft³/s, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,110 ft³/s Aug. 28, 1971, gage height, 18.7 ft, from floodmark, site and datum then in use, from rating curve extended above 1,100 ft³/s on basis of contracted-opening measurement of peak flow; no flow many times.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,500 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Elevation (ft)	Date	Time	Discharge (ft³/s)	Elevation (ft)
Mar. 18	2245	2050	22.50	Apr. 10	1430	*2410	23.34
Mar. 28	0015	1920	22.17	Apr. 16	1115	1860	22.02
Apr. 3	1000	1720	21.65	June 19	2130	2210	22.88

Minimum daily, 3.0 ft³/s Oct. 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.8	3.8	41	3.6	8.6	45	16	15	25	12	7.3	8.3
2	4.6	4.0	15	3.6	15	86	13	16	18	11	13	7.8
3	4.0	4.0	8.4	3.7	81	18	483	3	17	10	7.7	6.8
4	4.2	4.0	6.8	4.2	14	15	47	39	101	11	8.4	5.8
5	4.9	43	4.9	42	8.9	17	26	16	17	11	8.2	5.6
6	5.2	6.5	12	53	7.4	9.8	19	14	15	9.2	7.2	6.9
7	5.6	4.4	5.8	9.8	13	39	23	13	15	8.0	6.1	7.5
8	5.2	4.0	5.3	6.4	14	124	168	12	14	8.3	7.1	6.2
9	12	4.0	5.1	4.8	9.8	36	67	12	13	7.8	8.1	6.1
10	3.8	3.9	5.4	38	7.9	140	628	12	12	6.5	7.0	5.3
11	3.9	4.1	5.3	146	6.2	64	82	11	12	6.7	262	4.5
12	4.4	4.1	4.6	18	9.9	136	39	11	11	7.3	78	53
13	5.6	142	4.5	10	9.0	26	27	10	12	7.8	20	15
14	5.2	18	5.0	7.8	9.7	17	22	9.7	13	7.8	10	6.9
15	4.5	10	5.7	26	20	15	19	14	12	12	9.7	5.6
16	4.0	7.4	93	31	29	13	512	54	13	9.0	10	4.9
17	3.5	6.8	12	11	45	12	70	21	12	7.4	9.4	4.8
18	3.4	6.0	6.6	7.7	42	507	35	12	10	33	36	4.0
19	4.4	5.5	5.2	6.7	24	132	81	12	338	58	21	4.6
20	4.4	5.1	5.9	6.4	18	37	44	38	96	18	9.3	5.5
21	12	4.6	5.4	6.9	17	243	25	51	42	19	6.7	136
22	4.3	4.5	4.9	6.2	20	54	21	37	21	19	7.0	51
23	3.4	4.9	5.1	125	20	28	19	94	15	7.8	7.4	11
24	3.0	4.4	16	35	15	20	172	19	14	39	7.1	6.2
25	70	3.7	4.7	18	12	16	132	14	11	9.7	6.8	4.7
26	94	3.7	4.9	12	9.7	14	34	74	10	8.5	7.2	5.2
27	12	3.5	4.0	9.2	8.4	200	26	65	11	7.9	6.8	6.5
28	7.3	7.5	4.4	8.0	8.6	205	23	18	156	8.1	86	6.6
29	5.2	162	4.5	7.4	---	34	20	35	38	7.9	21	6.2
30	4.2	15	4.0	24	---	22	17	201	16	9.4	9.5	80
31	3.7	---	3.8	15	---	18	---	50	---	9.1	9.7	---
TOTAL	317.7	504.4	319.2	706.4	503.1	2342.8	2910	1016.7	1109	407.2	720.7	488.5
MEAN	10.2	16.8	10.3	22.8	18.0	75.6	97.0	32.8	37.0	13.1	23.2	16.3
MAX	94	162	93	146	81	507	628	201	338	58	262	136
MIN	3.0	3.5	3.8	3.6	6.2	9.8	13	9.7	10	6.5	6.1	4.0

CAL YR 1982 TOTAL 9330.6 MEAN 25.6 MAX 900 MIN 3.0
WTR YR 1983 TOTAL 11345.7 MEAN 31.1 MAX 628 MIN 3.0

01393450 ELIZABETH RIVER AT URSINO LAKE, AT ELIZABETH, NJ--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--February 1979 to current year.

COOPERATION.--Analyses of fecal coliform and fecal streptococci by the MPN method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
OCT 06...	1130	5.0	740	8.1	19.0	12.4	131	2.0	>240000	3300
JAN 17...	1030	9.9	4250	7.5	1.5	12.7	92	48	>24000	>2400
MAR 23...	1030	28	600	7.8	6.5	11.2	90	3.3	>24000	540
JUL 19...	1100	8.0	330	7.2	25.0	6.3	76	16	>240000	54000
AUG 17...	1300	10	600	8.0	24.0	9.9	117	3.9	>240000	13000

DATE	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 06...	240	74	14	44	2.3	120	79	72	.10
JAN 17...	190	63	7.7	820	3.4	61	67	1400	.10
MAR 23...	160	51	8.1	49	2.7	90	48	86	.10
JUL 19...	110	34	6.4	22	3.7	67	38	33	<.10
AUG 17...	210	66	12	34	2.2	128	61	70	<.10

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHATE, TOTAL (MG/L AS PO4)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 06...	15	406	.030	1.40	.580	1.0	2.4	.58	3.5
JAN 17...	7.3	2390	.040	1.10	.440	1.1	2.2	.45	6.3
MAR 23...	12	352	.210	3.00	.180	1.1	4.1	.39	6.0
JUL 19...	8.9	190	.130	.800	.290	2.1	2.9	.77	11
AUG 17...	16	365	.050	1.60	.320	1.1	2.7	.64	4.5

01393450 ELIZABETH RIVER AT URSINO LAKE, AT ELIZABETH, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	NITRO-GEN,NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	CARBON, INOR-GANIC, TOT IN BOT MAT (G/KG AS C)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (G/KG AS C)	ARSENIC TOTAL IN BOT-TOM MA-TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CD)	CHRO-MIUM, RECOV. FM BOT-TOM MA-TERIAL (UG/G)	COBALT, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CU)	IRON, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS FE)
OCT										
06...	1130	520	.6	6.2	<1	2	30	10	90	2700

DATE	LEAD, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS PB)	MANGA-NESE, RECOV. FM BOT-TOM MA-TERIAL (UG/G)	MERCURY RECOV. FM BOT-TOMCMA-TERIAL (UG/L AS HG)	NICKEL, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS NI)	SELE-NIUM, TOTAL IN BOT-TOM MA-TERIAL (UG/G)	ZINC, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS ZN)	PCB, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	PCN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	ALDRIN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	CHLOR-DANE, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)
OCT										
06...	140	48	<.01	40	<1	270	57	<1.0	<.1	21

DATE	DDD, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	DDE, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	DDT, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	DI-AZINON, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	DI-ELDRIN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	ENDO-SULFAN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	ENDRIN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	ETHION, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	HEPTA-CHLOR, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	HEPTA-CHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)
OCT										
06...	11	<.1	2.2	<.1	.8	<.1	<.1	<.1	<.1	<.1

DATE	LINDANE TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	MALA-THION, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	METH-OXY-CHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARA-THION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRI-THION, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	PARA-THION, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	PER-THANE IN BOTTOM MATERIL (UG/KG)	TOXA-PHENE, TOTAL IN BOT-TOM MA-TERIL (UG/KG)	TRI-THION, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)
OCT										
06...	<.1	<.1	<.1	<.1	<.1	<.1	<.1	<1.00	<10	<.1

01393950 WEST BRANCH RAHWAY RIVER AT WEST ORANGE, NJ

LOCATION.--Lat 40°47'01", long 74°16'27", Essex County, Hydrologic Unit 02030104, at bridge on Mountain Avenue, 300 ft downstream of Turtle Brook, and 400 ft southeast of intersection with Pleasant Valley Way in West Orange.

DRAINAGE AREA.--2.52 mi².

WATER-QUALITY RECORDS

PERIOD OF RECORD.--July 1982 to current year.

COOPERATION.--Analyses of fecal coliform and fecal streptococci by the MPN method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)	HARD-NESS (MG/L AS CACO3)
OCT 14...	1230	640	7.1	15.0	8.4	84	1.1	520	>2400	200
JAN 13...	1215	675	7.7	1.0	12.8	90	.9	350	>2400	150
MAR 22...	1300	465	7.6	8.0	11.4	98	1.1	220	130	120
JUN 14...	1130	750	7.5	20.0	--	--	1.9	220	200	230
JUL 20...	1300	390	7.8	24.0	8.3	99	2.7	3300	200	120
AUG 18...	1100	640	7.8	22.0	7.1	82	1.5	160000	13000	190

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFIDE TOTAL (MG/L AS S)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 14...	50	19	34	2.0	69	<.5	30	130	.10
JAN 13...	38	14	57	1.9	47	--	41	150	<.10
MAR 22...	28	11	41	1.5	39	--	30	89	.10
JUN 14...	56	22	51	1.5	82	--	37	130	<.10
JUL 20...	30	10	25	1.8	52	--	23	72	.10
AUG 18...	47	18	50	1.8	79	--	26	130	<.10

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVE (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MGL AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHATE, TOTAL (MG/L AS PO4)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 14...	12	362	.040	.500	.110	E.77	--	.12	4.8
JAN 13...	15	384	--	--	--	.79	--	.09	4.0
MAR 22...	13	299	.040	1.60	.110	.59	2.2	.18	4.5
JUN 14...	18	503	.240	3.40	.090	.54	3.9	2.60	3.2
JUL 20...	8.8	225	.050	.700	<.050	.63	1.3	<.18	10
AUG 18...	10	391	.030	.800	.080	2.8	3.6	.21	4.2

01393950 WEST BRANCH RAHWAY RIVER AT WEST ORANGE, NJ—Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	NITROGEN,NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	CARBON, INORGANIC, TOT IN BOT MAT (G/KG AS C)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (G/KG AS C)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)
OCT											
14...	1230	620	5.1	20	20	2	<1	<10	130	<1	1
JUN											
14...	1130	--	--	--	10	1	--	<10	110	<1	--

DATE	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)
OCT											
14...	10	10	10	8	30	370	2900	10	550	60	120
JUN											
14...	10	--	--	7	--	330	9	--	90	--	

DATE	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY RECOV. FM BOTTOMCMATERIAL (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	NICKEL, RECOV. FM BOTTOM MATERIAL (UG/G AS NI)	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	PHENOLS TOTAL (UG/L)	PCB, TOTAL IN BOTTOM MATERIAL (UG/KG)	PCN, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT											
14...	.2	<.01	5	10	<1	<1	30	120	<1	39	<1.0
JUN											
14...	.2	--	2	--	<1	--	40	--	<1	--	--

DATE	ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDD, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIAZINON, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDOSULFAN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ETHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT											
14...	<.1	34	20	3.4	62	<.1	1.5	<.1	<.1	<.1	<.1
JUN											
14...	--	--	--	--	--	--	--	--	--	--	--

DATE	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)	MALATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	METHOXYCHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARATHION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRITHION, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL IN BOTTOM MATERIAL (UG/KG)	PARATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	PERTHANE IN BOTTOM MATERIL (UG/KG)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)	TRITHION, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT											
14...	<.1	<.1	11	<.1	<.1	<.1	<.1	<.1	<1.00	<10	<.1
JUN											
14...	--	--	--	--	--	--	--	--	--	--	--

01394500 RAHWAY RIVER NEAR SPRINGFIELD, NJ

LOCATION.--Lat 40°41'11", long 74°18'44", Union County, Hydrologic Unit 02030104, on left bank 50 ft downstream from bridge on U.S. Highway 22, 100 ft downstream from Pope Brook, and 1.5 mi south of Springfield.

DRAINAGE AREA.--25.5 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1938 to current year.

REVISED RECORDS.--WSP 1622: 1945. WRD-NJ 1973: 1938(M), 1968(M), 1971(M).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 66.17 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records fair. Water for municipal supply diverted from river by city of Orange. The flow past this station is affected by diversions by pumpage from wells by Orange, South Orange, Short Hills Water Co., and Springfield station of Elizabethtown Water Co.

AVERAGE DISCHARGE.--45 years, 28.3 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,430 ft³/s Aug. 2, 1973, gage height, 9.76 ft, from floodmark, from rating curve extended above 1,600 ft³/s on basis of slope-area measurement of peak flow; minimum, 0.1 ft³/s Sept. 11, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,000 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Mar. 19	0045	1340	6.30	Apr. 10	1600	*1360	6.34
Mar. 21	1500	1140	5.82	Apr. 16	1500	1290	6.19
Apr. 3	1130	1090	5.67	June 19	2145	1050	5.55

Minimum daily discharge, 2.1 ft³/s Oct. 12, 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.7	6.0	19	4.3	9.8	35	27	26	32	9.5	6.2	6.0
2	5.2	8.1	32	4.2	16	150	22	24	22	8.6	14	5.3
3	5.3	9.7	10	4.1	98	37	549	22	18	8.3	6.1	5.2
4	5.2	11	8.2	4.4	25	20	95	40	107	8.1	5.8	5.4
5	5.2	38	6.4	11	13	19	49	19	31	8.6	5.8	5.5
6	4.5	5.5	11	51	9.7	14	35	15	20	9.5	6.0	6.0
7	4.6	4.8	6.3	6.7	12	43	32	13	16	8.4	5.9	6.3
8	3.7	4.6	5.8	5.4	12	123	136	14	13	8.1	6.4	6.5
9	8.5	5.4	5.6	5.2	9.5	78	150	15	12	7.4	6.9	6.2
10	3.4	6.0	5.7	28	8.1	207	608	14	10	8.1	6.5	6.1
11	2.8	5.9	5.8	182	6.1	84	191	13	11	8.6	179	5.8
12	2.1	5.8	5.4	13	6.9	236	66	13	11	8.1	75	34
13	2.7	131	5.3	8.0	54	46	13	10		7.6	9.6	16
14	3.6	8.2	5.8	6.7	9.2	30	35	13	10	7.7	7.4	5.5
15	2.8	5.3	6.3	10	13	25	30	16	10	10	6.9	5.5
16	2.7	5.5	46	18	19	20	685	43	9.3	9.5	7.2	5.3
17	2.5	6.0	21	8.9	31	18	296	26	9.7	7.4	6.5	6.1
18	2.6	4.9	7.4	6.4	37	278	71	13	9.2	13	6.2	6.2
19	2.7	5.0	6.0	6.0	26	515	120	13	188	38	17	6.1
20	2.7	4.6	6.2	5.9	21	72	123	33	149	12	5.7	6.3
21	5.4	4.4	5.7	6.0	25	482	75	35	23	11	5.2	55
22	2.5	4.1	5.2	6.0	35	130	51	29	13	16	5.5	58
23	2.1	4.3	4.8	27	47	56	41	113	11	6.9	6.0	5.6
24	2.2	5.0	9.0	48	40	38	183	25	9.8	18	5.6	4.6
25	40	4.8	5.6	21	27	30	235	15	9.0	8.8	5.7	4.6
26	82	4.7	5.4	19	20	26	72	60	8.3	7.2	6.0	5.1
27	6.3	4.5	4.7	12	14	112	46	110	9.0	6.3	5.7	5.8
28	5.4	7.6	4.8	9.8	13	402	37	26	104	6.5	23	5.8
29	5.2	119	5.1	9.4	---	64	31	45	70	6.5	26	5.6
30	5.5	23	4.7	16	---	39	28	165	13	16	6.0	44
31	6.0	---	4.4	18	---	30	---	97	---	9.7	6.3	---
TOTAL	240.1	462.7	284.6	581.4	612.9	3467	4165	1118	968.3	319.4	492.1	349.5
MEAN	7.75	15.4	9.18	18.8	21.9	112	139	36.1	32.3	10.3	15.9	11.6
MAX	82	131	46	182	98	515	685	165	188	38	179	58
MIN	2.1	4.1	4.4	4.1	6.1	14	22	13	8.3	6.3	5.2	4.6

CAL YR 1982 TOTAL 8772.3 MEAN 24.0 MAX 883 MIN 2.1
WTR YR 1983 TOTAL 13061.0 MEAN 35.8 MAX 685 MIN 2.1

01394500 RAHWAY RIVER NEAR SPRINGFIELD, NJ--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1978 to current year.

COOPERATION.--Analyses of fecal coliform and fecal streptococci by the MPN method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, FECAL, EC BROTH (MPN)	STREPTOCOCCI FECAL (MPN)
OCT										
06...	1300	4.6	540	7.6	17.0	8.3	84	1.1	500	200
JAN										
12...	1300	14	380	7.5	6.0	10.6	85	2.1	>2400	920
MAR										
23...	1300	55	390	7.6	5.5	11.9	94	2.4	1700	2200
JUN										
15...	1030	10	538	7.6	22.0	5.3	60	1.9	2200	800
JUL										
20...	1130	9.6	330	7.2	23.0	3.4	39	4.6	9400	>200
AUG										
18...	1300	6.0	540	7.7	22.0	6.1	69	2.4	1700	1300

DATE	HARDNESS (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	SULFIDE TOTAL (MG/L AS S)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)
OCT										
06...	180	54	11	28	1.6	96	<.5	40	61	.10
JAN										
12...	100	31	6.3	29	2.0	64	--	30	50	<.10
MAR										
23...	100	29	7.0	34	1.7	48	--	31	61	<.10
JUN										
15...	180	55	11	37	2.0	99	<.5	41	78	.10
JUL										
20...	110	34	5.8	19	2.4	63	--	29	37	.10
AUG										
18...	190	59	11	31	2.6	115	--	39	70	<.10

DATE	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHATE, TOTAL (MG/L AS PO4)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT									
06...	11	301	.080	1.00	.270	.55	1.6	.21	2.5
JAN									
12...	12	220	.020	1.50	.111	.58	2.1	.31	7.1
MAR									
23...	12	252	.010	1.40	.060	.65	2.1	.21	3.3
JUN									
15...	15	326	.070	1.20	.170	.84	2.0	.48	2.9
JUL									
20...	10	188	.080	1.00	.120	.99	2.0	.43	13
AUG									
18...	15	344	.040	1.40	.080	.56	2.0	.49	3.0

01394500 RAHWAY RIVER NEAR SPRINGFIELD, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	NITROGEN,NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	CARBON, INORGANIC, TOT IN BOT MAT (G/KG AS C)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (G/KG AS C)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)
OCT 06...	1300	340	3.9	15	30	2	<1	<10	90	3	1
JUN 15...	1030	--	--	--	10	2	--	<10	100	1	--

DATE	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)
OCT 06...	10	40	10	9	70	320	3	7	510	40	200
JUN 15...	20	--	--	61	--	400	--	5	--	150	--

DATE	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY RECOV. FM BOTTOMCMATERIAL (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	NICEL, RECOV. FM BOTTOM MATERIAL (UG/G AS NI)	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	PHENOLS TOTAL (UG/L)	PCB, TOTAL IN BOTTOM MATERIAL (UG/KG)	PCN, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 06...	.2	<.01	3	30	<1	<1	30	290	6	76	<1.0
JUN 15...	<.1	--	3	--	<1	--	30	--	<1	--	--

DATE	ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDD, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIAZINON, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDOSULFAN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ETHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 06...	<.1	94	23	<.1	6.3	<.1	1.7	.3	<.1	<.1	<.1
JUN 15...	--	--	--	--	--	--	--	--	--	--	--

DATE	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)	MALATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	METHOXYCHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARATHION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRITHION, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL IN BOTTOM MATERIAL (UG/KG)	PARATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	PERTHANE IN BOTTOM MATERIL (UG/KG)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)	TRITHION, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 06...	<.1	<.1	<.1	<.1	<.1	<.1	<.1	<.1	<1.00	<10	<.1
JUN 15...	--	--	--	--	--	--	--	--	--	--	--

01395000 RAHWAY RIVER AT RAHWAY, NJ

LOCATION.--Lat 40°37'05", long 74°17'00", Union County, Hydrologic Unit 02030104, on left bank 100 ft upstream from St. Georges Avenue bridge in Rahway and 0.9 mi upstream from Robinsons Branch.

DRAINAGE AREA.--40.9 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1908 to April 1915 (gage heights and discharge measurements only), October 1921 to current year.

REVISED RECORDS.--WSP 781: Drainage area. WSP 1552: 1922-23(M), 1924, 1930-31(M), 1937. WDR NJ-79-1: 1978.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 8.77 ft National Geodetic Vertical Datum of 1929. Prior to Aug. 25, 1934, nonrecording gage at site 40 ft downstream from Church Street and 1,500 ft downstream from present site at datum 2.77 ft lower.

REMARKS.--Water-discharge records poor. Water for municipal supply diverted from river by Rahway and Orange. The flow past this station is affected by diversions by pumpage from wells by Orange, South Orange, Short Hills Water Co., and Springfield station of Elizabethtown Water Co.

AVERAGE DISCHARGE.--62 years (water years 1922-83), 46.8 ft³/s, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,420 ft³/s Aug. 2, 1973, gage height, 7.88 ft, from rating curve extended above 3,000 ft³/s; no flow part or all of some days in many years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 600 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Mar. 18	2400	1380	4.33	Apr. 9	0145	768	3.47
Mar. 21	1515	1260	4.17	Apr. 10	1530	2090	5.16
Mar. 28	0200	1110	3.98	Apr. 17	0330	1490	4.48
Apr. 3	1115	1120	3.99	Aug. 11	2200	623	3.23

No flow part or all of many days in many months.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.4	9.3	30	2.2	16	29	36	34	51	12	3.6	4.9
2	1.2	13	51	3.8	16	224	31	32	32	11	9.9	1.2
3	.37	1.7	12	2.2	154	63	697	31	24	8.0	2.9	.51
4	.14	5.2	9.4	1.4	50	29	461	61	166	6.7	2.5	.10
5	.18	55	7.1	8.8	18	23	77	33	46	7.3	3.2	.02
6	.18	30	8.1	116	13	18	52	24	32	8.4	2.6	.01
7	.10	9.5	7.8	14	15	59	43	21	27	7.8	1.1	.00
8	.64	5.5	4.6	7.6	18	135	148	21	20	6.9	.00	.00
9	.00	7.7	4.4	5.2	13	166	396	20	17	6.3	1.2	.00
10	.00	5.5	3.1	7.1	10	283	840	19	15	4.9	1.0	.00
11	.84	6.0	1.0	281	9.4	180	853	18	15	4.7	90	.00
12	5.8	8.3	3.2	32	7.7	365	135	18	16	5.1	279	2.8
13	.75	232	3.7	13	11	100	71	18	16	4.2	31	63
14	1.9	49	3.2	10	11	45	53	17	16	4.5	8.1	4.4
15	4.3	11	3.2	15	14	41	45	21	16	4.8	5.0	2.2
16	6.1	9.4	67	33	29	23	595	53	16	12	4.5	.63
17	.00	6.2	38	22	46	19	1070	78	14	3.1	4.1	1.4
18	5.1	4.7	5.1	9.6	67	268	180	20	14	1.5	4.6	2.8
19	3.4	3.9	5.3	6.9	57	1070	149	.39	41	51	17	.04
20	.07	6.1	4.6	6.0	36	239	210	49	108	49	2.8	.09
21	4.0	5.5	4.0	6.1	36	580	116	50	59	7.9	.53	16
22	3.7	4.0	5.0	5.2	50	594	72	35	36	37	.33	170
23	.71	4.4	5.5	110	68	77	56	188	27	5.5	2.0	8.5
24	.04	4.3	5.4	129	63	54	221	40	20	33	.21	4.1
25	16	2.5	6.8	49	38	38	421	22	16	13	.13	1.6
26	160	3.0	4.6	40	26	34	146	43	13	7.6	.27	.47
27	26	3.3	5.1	19	18	72	70	229	13	4.3	.08	1.2
28	13	3.5	2.9	7.6	15	817	55	43	32	3.1	5.8	1.6
29	13	193	4.9	12	---	157	49	48	81	3.6	56	.69
30	5.0	33	3.2	14	---	57	41	227	16	2.3	4.2	72
31	3.3	---	3.0	40	---	43	---	214	---	19	7.5	---
TOTAL	278.22	735.5	323.3	1028.7	925.1	5902	7389	1727.39	1017	355.5	551.15	360.26
MEAN	8.97	24.5	10.4	33.2	33.0	190	246	55.7	33.9	11.5	17.8	12.0
MAX	160	232	67	281	154	1070	1070	229	166	51	279	170
MIN	.00	1.7	1.0	1.4	7.7	18	31	.39	13	1.5	.00	.00

CAL YR 1982 TOTAL 14810.73 MEAN 40.6 MAX 1040 MIN 0
WTR YR 1983 TOTAL 20593.12 MEAN 56.4 MAX 1070 MIN 0

01395000 RAHWAY RIVER AT RAHWAY, NJ--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1923-24, 1952, 1962, 1967-70, and February 1979 to current year.

COOPERATION.--Analyses of fecal coliform and fecal streptococci by the MPN method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, FECAL, EC BROTH (MPN)	STREPTOCOCCI FECAL (MPN)
JAN 12...	1100	29	193	7.5	7.0	11.4	94	3.2	>2400	>2400
MAR 16...	1230	27	410	8.1	9.5	12.8	111	1.5	130	240
MAY 26...	1300	19	320	7.6	19.0	--	--	5.1	130	20
JUL 19...	1230	7.9	500	7.8	26.0	6.9	84	4.8	9200	1700
AUG 17...	1030	4.2	300	7.5	22.0	8.2	93	3.6	500	200

DATE	HARDNESS (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)
JAN 12...	55	17	3.1	14	1.7	33	18	22	<.10
MAR 16...	110	33	7.4	32	1.7	65	38	59	.10
MAY 26...	110	32	6.3	21	1.7	69	28	39	<.10
JUL 19...	190	55	12	32	2.2	119	46	55	.10
AUG 17...	110	34	5.8	16	2.1	67	33	28	<.10

DATE	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHATE, TOTAL (MG/L AS PO4)	CARBON, ORGANIC TOTAL (MG/L AS C)
JAN 12...	5.0	106	.020	.600	.070	.80	1.4	.52	5.7
MAR 16...	11	243	.010	1.10	<.050	.45	1.6	.18	5.0
MAY 26...	9.6	204	.040	.700	.170	.76	1.5	.36	4.8
JUL 19...	11	315	.020	.500	<.050	.53	1.0	.28	5.0
AUG 17...	8.6	184	.040	.900	.140	.73	1.6	.37	5.8

01396001 ROBINSONS BRANCH RAHWAY RIVER AT MAPLE AVENUE, AT RAHWAY, NJ

LOCATION.--Lat 40°36'26", long 74°17'40", Union County, Hydrologic Unit 02030104, on right upstream abutment of bridge on Maple Avenue in Rahway, 2,000 ft downstream from Milton Lake, 1.0 mi downstream from Middlesex Reservoir dam, and 1.2 mi upstream from mouth.

DRAINAGE AREA.--21.6 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1939 to current year. Prior to October 1978, published as "Robinsons Branch Rahway River at Rahway, NJ" (sta 01396000).

REVISED RECORDS.--WDR-NJ-75-1: 1973(P).

GAGE.--Water-stage recorder. Datum of gage is 11.3 ft National Geodetic Vertical Datum of 1929 (levels from New Jersey Geological Survey bench mark). Prior to Sept. 26, 1978, water-stage recorder above Milton Dam at datum 8.69 ft higher.

REMARKS.--Water-discharge records good except those below 10 ft³/s, which are fair. Water diverted for municipal supply by Middlesex Water Co., from Middlesex Reservoir, capacity, 300,000,000 gal, 1.0 mi above station. No diversion during the year.

AVERAGE DISCHARGE.--44 years, 25.1 ft³/s, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,110 ft³/s July 15, 1975, gage height, 5.85 ft, from rating curve extended above 750 ft³/s on basis of flow over dam computation, site and datum then in use; maximum gage height, 6.02 ft Aug. 15, 1969, site and datum then in use; no flow many times.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 450 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Mar. 18	2245	956	4.93	Apr. 3	0545	800	4.31
Mar. 21	1345	1100	5.49	Apr. 10	1200	*1330	6.51
Mar. 28	0045	826	4.41	Apr. 16	1230	763	4.17

No flow part or all of many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.6	5.5	34	3.8	19	19	22	20	24	8.0	6.2	.00
2	2.6	5.6	36	3.8	16	148	17	18	18	7.2	4.2	.00
3	1.3	6.4	13	4.2	81	40	401	17	14	5.9	2.3	.00
4	1.8	7.5	9.8	2.8	37	18	134	29	75	5.6	3.5	.00
5	2.1	31	8.2	7.6	16	14	37	19	28	6.2	3.6	.00
6	2.5	11	10	61	11	13	27	15	25	5.2	3.0	.00
7	3.4	6.1	8.6	16	12	26	26	13	35	3.5	2.0	.00
8	3.8	5.5	6.4	9.9	13	88	145	14	17	3.8	1.2	.11
9	3.2	6.5	7.8	7.0	11	98	189	14	12	3.9	1.6	.54
10	2.4	9.9	4.8	11	9.6	165	585	12	12	3.1	.97	.02
11	1.6	7.6	6.2	175	27	103	327	12	11	8.0	54	.00
12	1.8	6.2	6.4	37	14	159	96	11	11	4.8	94	.56
13	2.8	110	9.5	12	8.9	48	41	10	11	3.6	18	.50
14	3.7	31	7.6	8.8	9.4	21	33	10	11	2.4	6.5	.00
15	2.7	12	7.0	14	11	17	31	14	9.8	2.4	4.3	.00
16	2.2	7.0	40	20	19	13	439	36	8.9	3.1	3.5	.00
17	2.2	6.9	25	17	35	13	317	41	8.6	2.3	3.0	.00
18	.40	6.0	9.1	11	61	235	91	15	8.5	1.5	4.7	.00
19	.86	5.7	5.6	10	54	396	92	12	51	39	16	.00
20	1.5	5.6	5.5	9.1	46	126	113	26	172	28	29	.00
21	5.0	5.4	5.2	7.6	39	411	54	22	46	7.1	29	2.2
22	2.9	5.2	4.3	6.7	50	289	36	30	25	6.4	28	55
23	2.1	5.7	4.1	73	56	73	31	97	17	3.6	28	6.5
24	1.0	7.3	7.7	120	39	28	152	23	14	16	27	2.3
25	14	3.1	8.8	67	23	22	254	14	12	13	26	.84
26	84	3.7	7.6	40	16	17	80	28	9.9	5.9	12	.19
27	15	5.9	3.6	23	11	74	35	112	10	3.4	.01	.10
28	6.6	3.0	4.7	16	11	364	28	28	62	3.3	5.7	.28
29	5.0	118	5.3	12	---	101	24	25	64	3.7	1.6	.28
30	5.3	27	5.1	14	---	31	22	99	11	4.9	.00	39
31	5.2	---	3.9	31	---	24	---	66	---	23	.00	---
TOTAL	190.56	477.3	320.8	851.3	755.9	3194	3879	902	833.7	237.8	418.88	108.42
MEAN	6.15	15.9	10.3	27.5	27.0	103	129	29.1	27.8	7.67	13.5	3.61
MAX	84	118	40	175	81	411	585	112	172	39	94	55
MIN	.40	3.0	3.6	2.8	8.9	13	17	10	8.5	1.5	.00	.00

CAL YR 1982 TOTAL 8224.76 MEAN 22.5 MAX 539 MIN .40
WTR YR 1983 TOTAL 12169.66 MEAN 33.3 MAX 585 MIN .00

01396090 SOUTH BRANCH RARITAN RIVER AT OUTLET OF BUDD LAKE, NJ

LOCATION.--Lat 40°51'38", long 74°45'38", Morris County, Hydrologic Unit 02030105, at bridge on Smithtown Road, 200 ft northwest of U.S. Route 46, and 0.5 mi downstream from Budd Lake dam.

DRAINAGE AREA.--5.03 mi².

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1964, 1977 to July 1983 (discontinued).

COOPERATION.--Field data and samples for laboratory analyses supplied by New Jersey Department of Environmental Protection, Division of Water Resources. Analyses of fecal coliform and fecal streptococci by the MPN method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)	HARD-NESS (MG/L AS CACO3)
OCT 06...	1030	187	6.8	18.0	8.3	E4.6	170	79	48
FEB 09...	1030	167	7.6	2.5	12.4	E2.8	<20	5	44
MAR 30...	1045	179	7.7	4.0	12.1	2.9	20	27	40
MAY 25...	1030	168	7.7	18.0	10.2	E41	40	14	40
JUL 14...	1100	189	7.2	23.0	2.2	E1.1	790	540	56

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFIDE TOTAL (MG/L AS S)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 06...	12	4.3	14	.50	24	<.5	12	26	<.10
FEB 09...	11	3.9	14	.80	26	--	10	25	<.10
MAR 30...	10	3.7	13	.80	22	--	13	27	<.10
MAY 25...	10	3.7	11	.80	25	--	9.9	18	<.10
JUL 14...	14	5.1	15	.90	39	--	10	28	.20

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHATE, TOTAL (MG/L AS PO4)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 06...	4.5	104	<.010	<.100	.250	1.3	--	.31	5.1
FEB 09...	1.5	100	<.010	.200	.150	.35	.55	.09	4.0
MAR 30...	2.3	111	<.010	.300	.180	.75	1.1	.12	4.5
MAY 25...	.8	84	<.010	<.100	.110	2.8	--	.24	5.9
JUL 14...	7.5	117	.020	.200	.320	.82	1.0	.24	8.6

01396090 SOUTH BRANCH RARITAN RIVER AT OUTLET OF BUDD LAKE, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	NITROGEN, NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	CARBON, INORGANIC, TOT IN BOT MAT (G/KG AS C)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (G/KG AS C)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC TOTAL IN BOTTOM MATERIAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)
OCT											
06...	1030	490	2.3	7.0	20	42	<1	<10	50	1	<1

DATE	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)
OCT											
06...	10	2	10	7	0	1200	1300	7	80	260	150

DATE	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	NICKEL, RECOV. FM BOTTOM MATERIAL (UG/G AS NI)	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	PHENOLS TOTAL (UG/L)	PCB, TOTAL IN BOTTOM MATERIAL (UG/KG)	PCN, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT											
06...	<.1	<.01	3	<10	<1	<1	40	30	<1	1	<1.0

DATE	ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDD, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIAZINON, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDOSULFAN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ETHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT											
06...	<.1	2.0	<.1	<.1	1.0	<.1	<.1	<.1	<.1	<.1	<.1

DATE	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)	MALATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	METHOXYCHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARATHION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRITHION, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL IN BOTTOM MATERIAL (UG/KG)	PARATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	PERTHANE IN BOTTOM MATERIL (UG/KG)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)	TRITHION, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT											
06...	<.1	<.1	<.1	<.1	<.1	<.1	<.1	<.1	<1.00	<10	<.1

01396280 SOUTH BRANCH RARITAN RIVER AT MIDDLE VALLEY, NJ

LOCATION.--Lat 40°45'40", long 74°49'18", Morris County, Hydrologic Unit 02030105, at bridge on Middle Valley Road in Middle Valley, 6.9 mi downstream from Drakes Brook.

DRAINAGE AREA.--47.6 mi².

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1964-65, 1967, 1976 to current year.

COOPERATION.--Field data and samples for laboratory analyses supplied by New Jersey Department of Environmental Protection, Division of Water Resources. Analyses of fecal coliform and fecal streptococci by the MPN method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)	HARD-NESS (MG/L AS CACO3)
OCT 06...	1230	22	260	8.1	15.5	12.4	E2.3	1100	130	98
FEB 09...	1145	79	214	8.0	.5	12.0	E1.1	80	<2	58
MAR 30...	1145	156	185	7.9	6.0	12.5	E1.4	<20	33	53
MAY 25...	1200	82	212	8.6	15.0	13.4	E2.3	170	70	73
JUL 14...	1245	26	263	8.1	21.0	10.7	E2.1	490	170	--
AUG 10...	1230	22	238	8.6	20.0	10.4	E1.7	130	2	100
SEP 21...	1200	17	293	8.3	17.5	10.3	E1.5	490	130	110

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFIDE TOTAL (MG/L AS S)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 06...	21	11	11	1.3	82	--	10	16	<.10
FEB 09...	13	6.2	12	1.1	40	--	12	22	<.10
MAR 30...	12	5.6	9.8	1.1	35	--	14	18	<.10
MAY 25...	17	7.3	9.3	1.1	54	<.5	19	12	<.10
JUL 14...	--	--	--	--	--	--	--	--	--
AUG 10...	22	12	11	1.3	87	--	10	17	10
SEP 21...	24	12	10	1.5	96	--	9.9	16	.10

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN TOTAL (MG/L AS N)	PHOS-PHATE, TOTAL (MG/L AS PO4)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 06...	11	146	.040	1.50	.100	.48	2.0	.55	2.2
FEB 09...	11	118	.010	1.30	.180	.24	1.5	.21	1.6
MAR 30...	9.9	117	.010	1.20	.190	.43	1.6	.30	2.7
MAY 25...	9.7	146	.020	1.30	.070	.42	1.7	.30	2.9
JUL 14...	--	--	.020	2.10	.050	.19	2.3	--	2.1
AUG 10...	12	145	.020	1.80	.050	.39	2.2	--	1.9
SEP 21...	11	154	.030	2.00	<.050	.14	2.1	--	1.6

01396280 SOUTH BRANCH RARITAN RIVER AT MIDDLE VALLEY, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	NITROGEN,NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	CARBON, INORGANIC, TOT IN BOT MAT (G/KG AS C)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (G/KG AS C)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)
OCT 06...	1230	530	.3	3.7	--	--	<1	--	--	--	<1
MAY 25...	1200	--	--	--	10	1	--	<10	30	1	--

DATE	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, REV. FM BOTTOM MATERIAL (UG/G)	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, ECOV. FM BOTTOM MATERIAL (UG/G)
OCT 06...	--	3	10	--	0	--	2700	--	30	--	200
MAY 25...	10	--	--	3	--	300	--	1	--	20	--

DATE	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	NICKEL, RECOV. FM BOTTOM MATERIAL (UG/G AS NI)	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	PHENOLS TOTAL (UG/L)	PCB, TOTAL IN BOTTOM MATERIAL (UG/KG)	PCN, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 06...	--	<.01	--	<10	--	<1	--	20	--	<1	<1.0
MAY 25...	<.1	--	<1	--	<1	--	20	--	<1	--	--

DATE	ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDD, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIAZINON, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDOSULFAN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ETHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 06...	<.1	2.0	.9	<.1	.5	<.1	<.1	<.1	<.1	<.1	<.1
MAY 25...	--	--	--	--	--	--	--	--	--	--	--

DATE	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)	MALATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	METHOXYCHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARATHION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRITHION, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL IN BOTTOM MATERIAL (UG/KG)	PARATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	PERTHANE IN BOTBOTTOM MATERIL (UG/KG)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)	TRITHION, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 06...	<.1	<.1	<.1	<.1	<.1	<.1	<.1	<.1	<1.00	<10	<.1
MAY 25...	--	--	--	--	--	--	--	--	--	--	--

01396500 SOUTH BRANCH RARITAN RIVER NEAR HIGH BRIDGE, NJ

LOCATION.--Lat 40°40'40", long 74°52'46", Hunterdon County, Hydrologic Unit 02030105, on left bank 1.0 mi northeast of High Bridge, and 4.4 mi upstream from Spruce Run.

DRAINAGE AREA.--65.3 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1918 to current year. Monthly discharge only for some periods, published in WSP 1302.

REVISED RECORDS.--WSP 601: 1924. WSP 781: Drainage area. WSP 1552: 1(M), 1920(M), 1921, 1923, 1924(M), 1927-28(M), 1934(M), 1941(M).

GAGE.--Water-stage recorder. Concrete control since Sept. 28, 1930. Datum of gage is 282.10 ft National Geodetic Vertical Datum of 1929 (levels from New Jersey Geological Survey bench mark). Prior to Sept. 30, 1921, reference point at same site and datum.

REMARKS.--Water-discharge records good except those below 30 ft³/s, which are fair. No gage-height record Feb. 11-15 and Mar. 27, 28. Slight diurnal fluctuation caused by small powerplant above station.

AVERAGE DISCHARGE.--65 years, 121 ft³/s, 25.17 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,910 ft³/s Jan. 25, 1979, gage height, 12.07 ft; maximum gage height, 12.23 ft Feb. 24, 1979 (ice jam); minimum discharge, 6.6 ft³/s Oct. 11, 1930; minimum daily 13 ft³/s Aug. 11, 1966.

EXTREMES OUTSIDE PERIOD OF RECORD.--Outstanding floods occurred on Feb. 6, 1896, in February 1902, and October 1903. At High Bridge, according to reports of the New Jersey State Geologist, the discharges for these floods respectively were 7,560 ft³/s, 3,840 ft³/s and 2,670 ft³/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,000 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Feb. 3	0815	1020	8.46	Apr. 3	1900	1170	8.65
Feb. 13	--	1000	--	Apr. 16	1615	*3530	10.49
Mar. 19	1115	1150	8.62	May 27	0630	1100	8.56
Mar. 21	2045	1070	8.53	May 30	2300	1100	8.56
Mar. 28	--	1600	--				

Minimum discharge, 30 ft³/s Sept. 19, 20, 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	46	42	87	64	114	154	235	260	271	83	66	48
2	43	42	104	62	145	338	222	246	232	74	83	45
3	41	41	83	61	741	226	729	235	210	63	61	43
4	40	45	80	57	272	179	365	243	402	59	53	41
5	38	178	74	61	202	161	279	220	282	68	52	39
6	38	86	79	108	174	149	252	198	204	71	51	38
7	38	62	77	82	174	197	240	186	203	67	49	37
8	37	56	65	70	165	223	365	182	177	65	45	36
9	38	52	61	65	148	269	587	210	157	64	43	35
10	42	49	55	75	133	344	895	171	147	61	42	35
11	35	48	58	431	150	267	632	159	139	60	113	35
12	35	47	58	169	500	352	414	151	129	59	286	43
13	37	253	56	114	950	251	352	144	122	57	92	59
14	42	128	60	97	900	225	317	138	116	54	65	40
15	40	83	63	103	700	207	298	138	111	54	58	36
16	36	69	265	101	200	187	2380	211	105	57	54	34
17	35	64	184	91	135	175	1140	296	103	53	51	33
18	35	61	101	85	154	246	633	163	100	51	50	33
19	34	59	86	82	156	938	563	144	104	69	49	31
20	35	57	84	191	138	387	572	188	146	163	47	31
21	36	56	81	285	134	608	607	177	118	72	45	41
22	36	55	76	270	161	478	531	180	103	73	43	106
23	34	54	72	283	208	325	416	361	93	61	42	50
24	32	53	87	258	214	272	484	198	88	61	41	41
25	41	50	89	178	180	238	655	153	82	72	40	38
26	111	48	80	144	160	215	412	216	77	60	39	37
27	66	49	73	119	132	300	352	646	75	55	39	37
28	50	48	72	107	133	900	324	252	87	52	40	36
29	46	205	74	99	---	325	298	250	109	51	94	35
30	44	117	69	99	---	268	282	529	144	50	84	39
31	42	---	65	117	---	250	---	452	---	87	54	---
TOTAL	1303	2257	2618	4128	7573	9654	15831	7297	4436	2046	1971	1232
MEAN	42.0	75.2	84.5	133	270	311	528	235	148	66.0	63.6	41.1
MAX	111	253	265	431	950	938	2380	646	402	163	286	106
MIN	32	41	55	57	114	149	222	138	75	50	39	31
CFSM	.64	1.15	1.29	2.04	4.13	4.76	8.09	3.60	2.27	1.01	.97	.63
IN.	.74	1.29	1.49	2.35	4.31	5.50	9.02	4.16	2.53	1.17	1.12	.70

CAL YR 1982 TOTAL 45103 MEAN 124 MAX 1550 MIN 32 CFSM 1.90 IN. 25.69
WTR YR 1983 TOTAL 60346 MEAN 165 MAX 2380 MIN 31 CFSM 2.53 IN. 34.38

01396535 SOUTH BRANCH RARITAN RIVER AT ARCH STREET AT HIGH BRIDGE, NJ

LOCATION.--Lat 40°39'49", long 74°53'52", Hunterdon County, Hydrologic Unit 02030105, at bridge on Arch Street in High Bridge, 0.9 mi northeast of Mariannes Corner, 1.0 mi downstream from Lake Solitude dam, and 4.3 mi northeast of Morton.

DRAINAGE AREA.--68.8 mi².

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976 to current year.

COOPERATION.--Field data and samples for laboratory analyses supplied by New Jersey Department of Environmental Protection, Division of Water Resources. Analyses of fecal coliform and fecal streptococci by the MPN method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	SREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)	HARD-NESS (MG/L AS CACO3)
OCT 04...	0940	36	237	7.4	15.0	10.4	E1.1	50	33	98
FEB 09...	1300	115	218	8.1	1.0	13.8	E1.1	20	2	62
MAR 30...	1300	280	184	8.2	6.0	12.9	<1.1	80	79	52
MAY 25...	1300	110	200	8.6	15.5	11.9	E2.7	50	23	70
JUL 14...	1400	36	264	8.2	23.5	9.8	E1.9	20	14	100
AUG 10...	1100	E26	221	8.5	22.5	8.8	E1.9	40	<2	100
SEP 21...	1030	--	273	8.2	19.5	8.8	2.3	80	70	110

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFIDE TOTAL (MG/L AS S)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 04...	21	11	9.2	1.7	65	--	12	15	.10
FEB 09...	14	6.5	11	1.1	43	--	14	18	<.10
MAR 30...	12	5.3	7.5	1.1	38	--	16	15	<.10
MAY 25...	16	7.4	8.0	1.1	56	--	11	21	<.10
JUL 14...	22	12	9.2	1.4	86	--	16	16	.10
AUG 10...	22	12	9.6	1.4	88	--	12	15	<.10
SEP 21...	24	13	8.9	1.5	94	<.5	12	14	<.10

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHATE, TOTAL (MG/L AS PO4)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 04...	11	169	<.010	2.20	.070	.22	2.4	.27	1.9
FEB 09...	12	123	.010	1.30	.120	.24	1.5	.15	1.4
MAR 30...	10	113	.010	1.20	.190	.34	1.5	.33	3.8
MAY 25...	9.8	142	.010	1.20	.070	.36	1.6	.21	2.8
JUL 14...	11	170	.020	--	--	--	--	.34	1.5
AUG 10...	10	145	.030	1.40	.070	.55	2.0	.37	2.1
SEP 21...	9.5	144	.010	1.50	<.050	.09	1.6	.40	1.8

01396535 SOUTH BRANCH RARITAN RIVER AT ARCH STREET AT HIGH BRIDGE, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	NITROGEN,NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	CARBON, INORGANIC, TOT IN BOT MAT (G/KG AS C)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (G/KG AS C)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)
OCT											
04...	0940	130	1.4	6.5	--	--	<1	--	--	--	<1
SEP											
21...	1030	--	--	--	<10	4	--	<10	30	<1	--

DATE	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)
OCT											
04...	--	5	10	--	20	--	3300	--	50	--	660
SEP											
21...	10	--	--	5	--	180	--	7	--	20	--

DATE	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	NICKEL, RECOV. FM BOTTOM MATERIAL (UG/G AS NI)	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	PHENOLS TOTAL (UG/L)	PCB, TOTAL IN BOTTOM MATERIAL (UG/KG)	PCN, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT											
04..	--	<.01	--	10	--	<1	--	100	--	4	<1.0
SEP											
21...	<.1	--	2	--	<1	--	40	--	<1	--	--

DATE	ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDD, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIAZINON, TOTAL IN BOTTOM MATERIAL (UGKG)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDOSULFAN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ETHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT											
04...	<.1	18	5.9	<.1	<.1	<.1	<.1	<.1	<1	<.1	<.1
SEP											
21...	--	--	--	--	--	--	--	--	--	--	--

DATE	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)	MALATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	METHOXYCHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARATHION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRITHION, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL IN BOTTOM MATERIAL (UG/KG)	PARATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	PERTHANE IN BOTTOM MATERIL (UG/KG)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)	TRITHION, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT											
04...	<.1	<.1	<.1	<.1	<.1	<.1	<.1	<.1	<1.00	<10	<.1
SEP											
21...	--	--	--	--	--	--	--	--	--	--	--

RARITAN RIVER BASIN

01396580 SPRUCE RUN AT GLEN GARDNER, NJ

LOCATION.--Lat 40°41'29", long 74°56'15", Hunterdon County, Hydrologic Unit 02030105, on right downstream wingwall of bridge on Sanatorium Road in Glen Gardner, 0.8 mi downstream from Alpaugh Brook, and 2.0 mi upstream from Spruce Run Reservoir.

DRAINAGE AREA.--12.3 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1978 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 389.10 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records fair. No gage-height record Jan. 19-22, Feb. 10-17, and Apr. 18-May 23.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,820 ft Jan. 24, 1979, gage height, 7.60 ft, from high-water mark, from rating curve extended above 700 ft³/s on basis of slope-conveyance computation; minimum, 1.1 ft³/s Oct. 1, 1982, minimum gage height, 1.76 ft Sept. 8, 1980.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 500 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Mar. 15	0015	520	3.78	Apr. 10	1200	868	4.55
Mar. 27	2300	581	3.91	Apr. 16	0330	*1330	5.52

Minimum discharge, 1.1 ft³/s Oct. 1, gage height 2.12 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.2	4.2	13	5.8	8.5	33	30	21	35	8.4	4.3	3.5
2	1.3	4.4	15	5.6	35	[illegible]	27	19	28	8.3	6.7	3.3
3	1.4	4.4	9.1	5.5	106	16	114	17	24	7.6	3.8	3.2
4	1.5	5.7	9.1	6.4	22	26	47	17	46	7.1	3.6	3.1
5	1.6	38	7.7	6.7	16	22	36	13	27	7.0	3.5	3.1
6	1.6	9.8	10	18	10	20	31	12	22	6.8	3.5	3.0
7	1.7	6.5	8.0	8.7	12	32	30	11	20	6.4	3.3	3.0
8	1.8	5.4	6.3	6.9	11	45	90	12	17	5.6	3.2	2.8
9	2.7	4.8	5.9	5.9	11	46	74	12	15	5.3	3.1	2.8
10	2.3	4.3	8.7	15	4.8	76	214	10	15	4.9	2.9	2.8
11	2.1	4.0	5.6	107	5.4	81	91	9.9	14	4.6	27	2.8
12	2.1	4.0	6.2	13	6.6	59	61	9.1	13	4.4	14	6.6
13	2.7	69	15	9.5	7.1	35	48	8.5	12	4.2	5.6	6.1
14	4.0	12	14	13	5.6	28	40	8.5	11	4.0	4.2	3.7
15	3.1	7.9	9.3	6.8	4.7	25	40	9.4	11	3.8	3.8	3.3
16	2.8	6.3	84	6.2	4.5	21	550	17	10	3.7	3.6	3.2
17	2.5	5.6	28	23	5.8	20	90	13	9.5	[illegible]	3.4	3.2
18	2.5	5.0	13	18	19	76	48	9.8	9.4	[illegible]	3.4	3.2
19	2.6	4.7	9.0	5.8	19	182	40	8.2	12	5.6	3.3	3.2
20	2.7	4.5	9.1	4.5	16	58	91	9.8	20	7.6	3.3	3.0
21	2.8	4.5	8.8	5.3	17	127	36	15	15	4.3	3.1	9.8
22	2.8	4.3	8.3	6.6	25	98	28	29	11	4.2	2.9	11
23	2.7	4.1	7.7	25	88	45	26	31	8.9	3.8	2.9	4.1
24	2.8	4.0	15	38	37	33	70	38	8.4	4.2	2.9	3.7
25	6.0	3.7	11	16	30	33	122	25	7.9	4.3	2.9	3.6
26	22	3.6	8.8	11	23	25	68	63	7.7	3.8	2.8	3.5
27	7.5	3.6	7.3	8.2	18	82	36	60	7.9	3.6	2.9	3.4
28	5.5	3.8	7.4	6.8	19	105	32	32	20	3.8	3.2	3.4
29	4.8	67	7.7	6.0	---	46	28	39	24	3.8	4.3	3.3
30	4.4	14	6.4	6.3	---	36	24	87	9.4	3.8	4.0	4.0
31	4.3	---	5.9	10	---	33	---	47	---	3.5	3.5	---
TOTAL	109.8	323.1	376.4	429.9	546.6	1598	2212	706.8	481.1	154.2	108.3	117.8
MEAN	3.54	10.8	12.1	13.9	19.5	51.5	73.7	22.8	16.0	4.97	[illegible]	3.93
MAX	22	69	84	107	106	182	550	87	46	8.4	27	11
MIN	1.2	3.6	5.6	4.5	4.5	20	26	8.2	7.7	3.3	2.8	2.8
CFSM	.29	.88	.98	1.13	1.59	4.19	5.99	1.85	1.33	.40	[illegible]	.32
IN.	.33	.98	1.14	1.30	1.65	4.83	6.69	2.14	1.48	.47	[illegible]	.36

CAL YR 1982 TOTAL 5966.5 MEAN 16.3 MAX 245 MIN 1.2 CFSM 1.33 IN. 18.05
WTR YR 1983 TOTAL 7210.5 MEAN 19.8 MAX 550 MIN 1.2 CFSM 1.61 IN. 21.81

01396588 SPRUCE RUN NEAR GLEN GARDNER, NJ

LOCATION.--Lat 40°40'41", long 74°55'06", Hunterdon County, Hydrologic Unit 02030105, at site 800 ft downstream of Rocky Run, 0.3 mi above Van Syckel Road bridge, 1.5 mi northwest of High Bridge, and 1.6 mi southeast of Glen Gardner.

DRAINAGE AREA.--15.5 mi².

WATER-QUALITY RECORDS

PERIOD OF RECORD.--February 1979 to current year.

COOPERATION.--Field data and samples for laboratory analyses supplied by the New Jersey Department of Environmental Protection, Division of Water Resources. Analyses of fecal coliform and fecal streptococci by the MPN method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)	HARD-NESS (MG/L AS CACO3)
OCT										
04...	1100	2.0	173	7.6	15.0	11.8	E1.1	110	240	61
JAN										
26...	0950	14	153	6.7	2.0	14.6	<.6	40	920	46
MAR										
30...	1000	44	138	6.7	4.0	12.7	<1.0	130	49	42
MAY										
19...	1115	E10	138	7.9	12.0	12.8	E1.8	230	130	46
JUL										
18...	1200	4.2	168	8.0	23.0	9.5	E1.6	220	350	57
AUG										
08...	1200	4.0	165	8.2	24.0	10.0	E2.1	20	140	57
SEP										
26...	1030	4.4	166	6.8	11.0	12.0	E1.6	50	350	58

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFIDE TOTAL (MG/L AS S)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT									
04...	15	5.6	9.2	1.6	40	--	19	12	.10
JAN									
26...	11	4.4	10	1.1	21	--	19	14	<.10
MAR									
30...	10	4.2	8.0	1.1	20	--	21	13	.10
MAY									
19...	11	4.4	7.2	1.0	27	--	20	11	.10
JUL									
18...	14	5.4	9.8	1.6	35	--	20	14	.10
AUG									
08...	14	5.4	9.1	1.6	38	--	21	13	.20
SEP									
26...	14	5.5	9.3	1.8	39	<.5	22	12	.10

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHATE, TOTAL (MG/L AS PO4)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT									
04...	18	123	<.010	.500	.100	E.28	--	.15	1.4
JAN									
26...	15	109	<.010	1.10	.250	.50	1.6	.09	2.5
MAR									
30...	12	100	<.010	1.30	.100	.28	1.6	.15	1.9
MAY									
19...	13	110	<.010	.800	.100	.42	1.2	.18	1.9
JUL									
18...	18	104	.010	1.10	.050	.34	1.4	.31	2.0
AUG									
08...	16	105	.010	.900	<.050	E.37	--	1.16	1.3
SEP									
26...	18	106	<.010	1.00	<.050	<.05	--	.43	1.4

01396588 SPRUCE RUN NEAR GLEN GARDNER, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	NITROGEN, NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	CARBON, INORGANIC, TOT IN BOT MAT (G/KG AS C)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (G/KG AS C)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)
SEP 26...	1030	1200	.2	2.5	20	3	<1	<10	120	<1	<1

DATE	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)
SEP 26...	10	3	<10	3	<10	170	3300	9	<10	90	380

DATE	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/G AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	NICKEL, RECOV. FM BOTTOM MATERIAL (UG/G AS NI)	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	PHENOLS TOTAL (UG/L)	PCB, TOTAL IN BOTTOM MATERIAL (UG/KG)	PCB, TOTAL IN BOTTOM MATERIAL (UG/KG)
SEP 26...	<.1	<.01	<1	<10	<1	<1	30	20	2	<1	<1.0

DATE	ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDD, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIAZINON, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDOSULFAN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ETHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)
SEP 26...	<.1	1.0	.2	<.1	.2	<.1	<.1	<.1	<.1	<.1	<.1

DATE	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)	MALATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	METHOXYCHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARATHION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRITHION, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL IN BOTTOM MATERIAL (UG/KG)	PARATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	PERTHANE IN BOTTOM MATERIAL (UG/KG)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)	TRITHION, TOTAL IN BOTTOM MATERIAL (UG/KG)
SEP 26...	<.1	<.1	<.1	<.1	<.1	<.1	<.1	<.1	<1.00	<10	<.1

01396660 MULHOCKAWAY CREEK AT VAN SYCKEL, NJ

LOCATION.--Lat 40°38'51", long 74°58'09", Hunterdon County, Hydrologic Unit 02030105, at bridge on Jutland Road, 0.2 mi south of Van Syckel, 0.8 mi north of Perryville, and 0.3 mi upstream from Spruce Run Reservoir.

DRAINAGE AREA.--11.8 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1973-77. July 1977 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 280 ft, from topographic map.

REMARKS.--Water-discharge records good except those for periods of no gage heights, Oct. 1-20 and June 28-Sept. 21, which are fair.

AVERAGE DISCHARGE.--6 years, 20.2 ft³/s, 23.25 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,950 ft³/s Jan. 24, 1979, gage height, 6.48 ft, from rating curve extended above 200 ft³/s; minimum, 1.1 ft³/s Sept. 23, 1980, gage height, 0.66 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 300 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Jan. 11	0030	361	2.91	Apr. 10	1215	*1340	4.96
Mar. 18	2400	447	3.17	Apr. 16	0400	1170	4.68
Mar. 21	1200	535	3.41	Apr. 25	0230	355	2.86
Mar. 27	2315	750	3.80	May 22	2330	550	3.36
Apr. 3	0900	327	2.76	May 26	2130	364	2.84
Apr. 8	1845	342	2.82	June 19	2045	852	4.08

Minimum discharge, 1.9 ft³/s Sept. 21, but may have been lower during period of no gage-height record, gage-height, 0.68 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983 MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.1	4.3	17	7.5	15	30	29	34	25	13	5.7	3.7
2	4.7	4.3	16	7.3	34	65	27	32	22	12	5.1	3.5
3	4.5	4.3	11	7.2	63	27	122	31	20	11	4.8	3.4
4	4.2	7.3	11	6.7	22	22	39	32	39	11	4.9	3.3
5	4.0	26	9.5	9.8	16	20	32	26	22	10	5.1	3.2
6	4.0	8.0	11	16	14	19	29	25	19	9.8	4.9	3.0
7	4.0	6.5	8.9	9.6	16	27	29	24	18	9.7	4.4	2.8
8	4.0	[illegible]	8.0	8.4	15	36	106	26	16	9.4	4.1	2.5
9	4.2	5.5	7.7	7.7	13	30	67	26	14	9.2	3.8	2.4
10	4.4	5.3	7.0	29	12	74	312	22	14	9.0	3.6	2.3
11	3.9	5.3	7.8	78	13	32	82	21	13	8.8	55	2.2
12	3.8	5.3	7.4	17	22	57	56	20	13	8.6	19	7.5
13	4.0	93	6.7	11	14	28	48	19	12	8.3	8.7	4.9
14	4.5	12	6.5	10	13	23	42	18	11	8.1	6.9	3.6
15	4.3	8.6	7.1	12	12	22	53	19	11	8.0	6.2	3.1
16	4.0	7.3	[illegible]	[illegible]	14	21	528	37	10	7.8	5.8	3.0
17	3.9	[illegible]	[illegible]	[illegible]	17	19	95	28	10	6.7	5.5	3.1
18	[illegible]	[illegible]	[illegible]	[illegible]	24	91	78	19	10	14	5.6	3.0
19	[illegible]	[illegible]	[illegible]	[illegible]	23	149	78	18	84	29	5.3	2.7
20	[illegible]	[illegible]	[illegible]	[illegible]	20	41	93	21	54	12	4.7	2.6
21	[illegible]	[illegible]	[illegible]	[illegible]	23	148	67	45	27	8.7	4.3	5.8
22	[illegible]	[illegible]	[illegible]	[illegible]	34	55	51	63	17	8.2	4.1	8.1
23	[illegible]	[illegible]	[illegible]	[illegible]	38	41	45	74	13	6.4	4.0	2.9
24	[illegible]	[illegible]	[illegible]	[illegible]	31	37	93	28	11	8.3	3.8	2.4
25	[illegible]	[illegible]	[illegible]	[illegible]	26	33	150	22	10	8.1	3.7	2.2
26	12	[illegible]	[illegible]	[illegible]	21	30	57	82	9.4	6.7	3.5	2.2
27	5.7	[illegible]	[illegible]	[illegible]	18	101	50	52	8.8	5.6	3.4	2.2
28	[illegible]	5.7	[illegible]	[illegible]	19	100	44	27	23	5.4	3.8	2.2
29	[illegible]	[illegible]	[illegible]	[illegible]	---	39	40	38	18	5.2	4.2	2.1
30	[illegible]	[illegible]	[illegible]	[illegible]	---	33	37	59	14	5.4	4.1	3.3
31	[illegible]	---	[illegible]	[illegible]	---	31	---	31	---	5.6	3.9	---
TOTAL	[illegible]	[illegible]	[illegible]	[illegible]	602	1481	2579	1019	588.2	289.0	211.9	99.2
MEAN	[illegible]	[illegible]	[illegible]	[illegible]	21.5	47.8	86.0	32.9	19.6	9.32	6.84	3.31
MAX	12	[illegible]	[illegible]	78	63	149	528	82	84	29	55	8.1
MIN	3.7	4.3	6.5	6.7	12	19	27	18	8.8	5.2	3.4	2.1
CFSM	.39	[illegible]	.97	1.45	1.82	4.05	7.29	2.79	1.66	.79	.58	.28
IN.	.45	[illegible]	1.11	1.67	1.90	4.67	8.13	3.21	1.85	.91	.67	.31

CAL YR 1982 TOTAL [illegible] MEAN 17.9 MAX 356 MIN 3.5 CFSM 1.52 IN. 20.63
WTR YR 1983 TOTAL 8210.9 MEAN 22.5 MAX 528 MIN 2.1 CFSM 1.91 IN. 25.89

01396660 MULHOCKAWAY CREEK AT VAN SYCKEL, NJ--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976 to current year.

COOPERATION.--Field data and samples for laboratory analyses supplied by the New Jersey Department of Environmental Protection, Division of Water Resources. Analyses of fecal coliform and fecal streptococci by the MPN method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, FECAL, EC BROTH (MPN)	STREPTOCOCCI FECAL (MPN)	HARDNESS (MG/L AS CACO3)
OCT 04...	1300	4.2	190	7.5	15.5	10.0	E1.5	230	350	83
JAN 26...	1140	20	187	7.0	2.0	13.5	<1.1	70	130	59
MAR 30...	1100	33	143	6.7	5.5	12.5	<.9	<20	8	50
MAY 19...	1030	18	148	7.2	11.5	12.0	E1.6	80	350	57
JUL 18...	1100	14	192	8.1	21.5	9.0	E2.1	700	350	76
AUG 08...	1015	4.1	190	7.2	21.0	9.2	3.3	490	920	75
SEP 26...	1130	2.4	205	7.7	11.5	11.0	E1.7	130	1600	87

DATE	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	SULFIDE TOTAL (MG/L AS S)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)
OCT 04...	21	7.3	6.6	1.6	60	<.5	15	8.1	<.10
JAN 26...	15	5.2	12	1.3	35	--	19	15	<.10
MAR 30...	13	4.3	5.8	1.1	30	--	21	8.3	<.10
MAY 19...	15	4.7	5.6	1.0	41	<.5	19	8.5	<.10
JUL 18...	19	6.9	7.1	1.4	60	--	17	8.2	<.10
AUG 08...	19	6.8	6.8	1.3	64	--	17	8.4	.10
SEP 26...	22	7.9	7.2	1.3	71	--	17	8.1	.10

DATE	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHATE, TOTAL (MG/L AS PO4)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 04...	16	138	<.010	1.00	.050	.14	1.1	.06	1.5
JAN 26...	13	116	<.010	1.00	.070	.20	1.1	.09	2.3
MAR 30...	11	99	<.010	1.10	.210	.49	1.6	.09	1.7
MAY 19...	12	111	<.010	.800	.060	.25	1.1	.21	2.0
JUL 18...	16	128	.010	1.30	<.050	.29	1.6	.34	1.8
AUG 08...	15	140	.010	1.10	.070	E.08	--	1.10	1.9
SEP 26...	18	124	<.010	1.40	.090	.51	1.9	.18	1.0

01396660 MULHOCKAWAY CREEK AT VAN SYCKEL, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	NITROGEN, NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	CARBON, INORGANIC, TOT IN BOT MAT (G/KG AS C)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (G/KG AS C)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)
OCT											
04...	1300	--	--	--	10	1	--	<10	20	1	--
MAY											
19...	1030	--	--	--	<10	<1	--	<10	10	1	--
SEP											
26...	1130	560	.4	3.2	--	--	<1	--	--	--	<1

DATE	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)
OCT											
04...	10	--	--	4	--	200	--	2	--	30	--
MAY											
19...	<10	--	--	<1	--	160	--	4	--	20	--
SEP											
26...	--	2	<10	--	0	--	2900	--	<10	--	170

DATE	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	NICKEL, RECOV. FM BOTTOM MATERIAL (UG/G AS NI)	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	PHENOLS TOTAL (UG/L)	PCB, TOTAL IN BOTTOM MATERIAL (UG/KG)	PCN, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT											
04...	<.1	--	3	--	<1	--	20	--	3	--	--
MAY											
19...	<.1	--	2	--	<1	--	10	--	<1	--	--
SEP											
26...	--	<.01	--	<10	--	1	--	10	--	3	<1.0

DATE	ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDD, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIAZINON, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDOSULFAN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ETHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT											
04...	--	--	--	--	--	--	--	--	--	--	--
MAY											
19...	--	--	--	--	--	--	--	--	--	--	--
SEP											
26...	<.1	<1.0	<.1	<.1	<.1	<.1	<.1	<.1	<.1	<.1	<.1

DATE	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)	MALATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	METHOXYCHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARATHION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRITHION, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL IN BOTTOM MATERIAL (UG/KG)	PARATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	PERTHANE IN BOTTOM MATERIL (UG/KG)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)	TRITHION, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT											
04...	--	--	--	--	--	--	--	--	--	--	--
MAY											
19...	--	--	--	--	--	--	--	--	--	--	--
SEP											
26...	<.1	<.1	<.1	<.1	<.1	<.1	<.1	<.1	<1.00	<10	<.1

01396800 SPRUCE RUN AT CLINTON, NJ

LOCATION.--Lat 40°38'21", long 74°54'58", Hunterdon County, Hydrologic Unit 02030105, 1,800 ft downstream from dam at Spruce Run Reservoir, 0.2 mi north of Clinton, 0.3 mi upstream from mouth, and 2.2 mi southwest of High Bridge.

DRAINAGE AREA.--41.3 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1959 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Concrete control since Mar. 15, 1964. Datum of gage is 193.5 ft National Geodetic Vertical Datum of 1929. May to Nov. 24, 1959, nonrecording gage; Nov. 25, 1959 to July 23, 1961, water-stage recorder at site 1,800 ft upstream and at datum 1.41 ft lower; July 24, 1961 to Mar. 14, 1964, water-stage recorder at site 1,500 ft upstream at datum 1.41 ft lower.

REMARKS.--Water-discharge records fair. Flow regulated by Spruce Run Reservoir (see Raritan River Basin, reservoirs in).

AVERAGE DISCHARGE.--24 years, 62.4 ft^3/s, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,410 ft^3/s Apr. 2, 1970, gage height, 5.17 ft; no flow Aug. 22 to Sept. 17, 1963, Sept. 19, 1963 to Mar. 14, 1964, Mar. 19, 1964, result of filling Spruce Run Reservoir.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,490 ft^3/s Apr. 16, gage height, 4.19 ft; minimum, 0.77 ft^3/s Nov. 7, 8, gage height, 1.08 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.8	2.9	9.0	7.2	102	85	122	146	134	27	90	94
2	8.6	2.8	6.5	7.7	82	93	106	136	106	30	114	132
3	14	11	24	22	30	107	317	132	87	51	137	151
4	8.7	16	6.6	63	152	84	235	136	161	82	137	161
5	8.7	4.8	6.6	56	145	84	156	108	126	81	152	163
6	8.4	.98	6.6	20	92	84	129	91	90	84	166	163
7	11	.80	6.6	6.6	95	84	123	80	83	88	155	175
8	12	21	4.6	6.5	157	84	193	92	66	88	153	196
9	14	57	3.8	6.6	134	84	346	111	45	97	172	212
10	14	54	14	7.1	85	117	692	71	44	124	178	213
11	9.8	60	29	7.8	42	157	517	54	47	120	138	203
12	9.7	84	29	13	42	235	292	39	63	119	4.4	205
13	8.6	51	48	7.1	42	167	234	46	55	149	5.5	98
14	8.6	6.0	70	6.6	19	112	192	50	34	166	5.5	142
15	9.0	24	71	6.9	1.1	138	173	60	33	188	63	166
16	8.5	47	33	16	23	114	1990	94	31	184	95	166
17	14	34	7.2	9.1	42	84	691	142	30	189	117	163
18	9.1	31	7.1	33	74	87	408	79	32	177	117	181
19	9.2	47	7.2	55	98	394	374	59	67	176	130	187
20	8.1	72	7.2	41	98	236	321	78	163	169	148	185
21	7.8	65	7.2	40	98	322	296	110	107	184	153	152
22	8.9	47	7.1	40	120	326	252	120	67	166	186	37
23	9.5	51	7.1	42	96	190	197	272	48	157	186	54
24	14	62	7.2	42	110	124	284	146	35	118	188	130
25	9.3	62	7.1	78	138	130	576	83	38	51	196	121
26	9.4	67	7.1	101	138	106	305	129	34	85	201	98
27	9.3	82	7.1	98	138	135	212	336	68	92	204	108
28	6.6	92	7.2	98	104	445	188	156	48	131	215	130
29	2.7	55	7.2	98	---	238	172	138	28	168	127	161
30	4.1	18	7.2	98	---	135	158	210	31	176	107	135
31	4.2	---	7.2	98	---	120	---	194	---	105	57	---
TOTAL	288.6	1228.28	475.7	1231.2	2497.1	4901	10251	3698	2001	3822	4097.4	4482
MEAN	9.31	40.9	15.3	39.7	89.2	158	342	119	66.7	123	132	149
MAX	14	92	71	101	157	445	1990	336	163	189	215	213
MIN	2.7	.80	3.8	6.5	1.1	84	106	39	28	27	4.4	37

CAL YR 1982 TOTAL 20355.90 MEAN 55.8 MAX 619 MIN .34
WTR YR 1983 TOTAL 38973.28 MEAN 107 MAX 1990 MIN .80

01396800 SPRUCE RUN AT CLINTON, NJ--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1960-62, 1967 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: October 1968 to September 1969, January 1971 to September 1980.
SUSPENDED-SEDIMENT DISCHARGE: October 1960 to April 1961.

COOPERATION.--Field data and samples for laboratory analyses supplied by the New Jersey Department of Environmental Protection, Division of Water Resources. Analyses of fecal coliform and fecal streptococci by the MPN method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)	HARD-NESS (MG/L AS CACO3)
OCT										
04...	1210	2.2	168	7.4	18.0	10.5	E1.6	20	23	61
JAN										
26...	1050	101	162	7.0	1.0	16.0	E1.9	<20	2	54
MAR										
30...	1200	134	149	6.8	5.5	13.0	E1.5	<20	2	53
MAY										
19...	0950	59	133	7.6	15.0	9.9	E3.3	<20	26	45
JUL										
18...	1015	177	140	7.3	21.0	8.5	E1.9	50	33	52
AUG										
08...	1115	142	148	7.0	22.5	9.6	2.8	<20	17	49
SEP										
26...	1230	66	149	7.4	17.5	11.0	2.6	20	23	55

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFIDE TOTAL (MG/L AS S)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT									
04...	15	5.6	7.0	1.7	43	--	13	9.9	.10
JAN									
26...	13	5.3	7.8	1.4	40	--	18	8.6	.10
MAR									
30...	13	5.1	7.1	1.3	38	--	19	11	.10
MAY									
19...	11	4.2	6.2	1.1	29	--	19	10	.10
JUL									
18...	13	4.7	7.3	1.4	34	--	19	9.8	<.10
AUG									
08...	12	4.7	6.7	1.1	36	--	18	9.3	.10
SEP									
26...	14	4.9	6.6	1.3	37	<.5	19	9.7	.10

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHATE, TOTAL (MG/L AS PO4)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT									
04...	5.1	115	<.010	<.100	.470	.76	--	.09	2.2
JAN									
26...	3.5	85	<.010	.200	.060	.27	.47	.06	2.7
MAR									
30...	4.5	100	<.010	.400	.190	.53	.93	.06	3.1
MAY									
19...	.9	92	<.010	.300	.140	.52	.82	.15	2.7
JUL									
18...	4.0	85	.020	.400	.050	.56	.96	.61	3.6
AUG									
08...	4.5	90	.030	.300	.090	E.57	--	.80	8.2
SEP									
26...	4.3	85	<.010	<.050	.130	.47	--	.09	2.9

01396800 SPRUCE RUN AT CLINTON, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
SEP								
26...	1230	10	4	<10	30	<1	20	4

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
SEP								
26...	580	9	700	<.1	<1	<1	20	3

01397000 SOUTH BRANCH RARITAN RIVER AT STANTON, NJ

LOCATION.--Lat 40°34'21", long 74°52'10", Hunterdon County, Hydrologic Unit 02030105, on right bank at downstream side of highway bridge at Stanton Station, 0.4 mi upstream from Prescott Brook, and 1.4 mi west of Stanton.

DRAINAGE AREA.--147 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1903 to December 1906, July 1919 to current year. Monthly discharge only for some periods published in WSP 1302.

REVISED RECORDS.--WSP 561: Drainage area. WSP 1552: 1904, 1922-24(M), 1928-29(M), 1933-35(M).

GAGE.--Water-stage recorder. Datum of gage is 125.01 ft National Geodetic Vertical Datum of 1929. Prior to Aug. 17, 1925, nonrecording gage on downstream side of highway bridge at same site and datum.

REMARKS.--Water-discharge records good. Flow regulated by Spruce Run Reservoir since September 1963 (see Raritan River Basin, reservoirs in). Occasional regulation at low flows by ponds above station. Slight diurnal fluctuation caused by small powerplants above station. Water diverted by Hamden Pumping Station, 4.0 mi upstream, into Round Valley Reservoir since February 1966 (see Raritan River Basin, diversions).

AVERAGE DISCHARGE.--67 years (water years 1904-06, 1920-83) 243 ft³/s, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,000 ft³/s Aug. 19, 1955, gage height, 15.22 ft, from rating curve extended above 6,400 ft³/s on basis of computation of flow over Clinton Dam, 6.5 mi upstream, at gage height 10.72 ft, contracted-opening measurement 1.7 mi downstream, and slope-area measurement 0.4 mi downstream at gage height 15.22 ft, adjusted to present site; minimum, 9 ft³/s Nov. 7, 1931; minimum daily, 12 ft³/s Oct. 18, 1963.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,670 ft³/s Apr. 16, gage height, 9.90 ft; minimum, 40 ft³/s Oct. 6, gage height, 2.10 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	90	67	128	92	272	326	420	555	579	149	178	133
2	83	66	139	90	314	617	300	514	476	145	216	170
3	84	65	133	90	989	478	1270	486	408	145	218	193
4	82	92	115	127	574	354	863	499	712	177	196	206
5	77	220	111	128	460	325	565	426	556	174	221	210
6	69	128	108	147	339	306	466	373	391	174	241	207
7	75	92	113	116	343	360	425	341	366	172	225	214
8	82	86	98	102	394	394	643	339	321	167	206	240
9	83	125	88	93	353	492	1140	411	275	168	231	256
10	84	121	88	98	315	642	1950	310	253	200	232	261
11	76	120	108	741	267	626	1650	265	245	194	383	251
12	72	137	110	279	1270	828	941	246	230	183	427	293
13	72	360	115	181	1420	623	748	243	245	218	143	209
14	79	194	146	148	1280	466	632	238	195	231	97	187
15	80	124	131	162	1080	446	563	287	184	269	117	212
16	73	134	371	162	708	399	4740	260	176	262	158	218
17	74	118	316	151	240	335	2830	252	172	275	172	206
18	72	114	142	161	279	470	1490	247	169	253	174	231
19	69	115	123	188	337	1660	1320	263	184	261	179	242
20	69	134	121	178	313	831	1290	318	404	383	199	240
21	69	133	118	211	314	1170	1190	406	298	292	199	240
22	67	117	114	200	387	1180	1110	384	226	260	233	222
23	69	117	110	260	450	704	861	1060	182	239	243	100
24	71	123	116	494	452	534	1040	506	161	211	240	184
25	80	122	121	372	438	484	1740	339	153	156	251	178
26	147	120	114	338	400	341	1070	872	130	152	255	149
27	118	132	109	291	356	430	835	1570	164	151	255	157
28	90	140	106	267	326	1640	741	728	183	178	266	166
29	73	351	108	251	---	768	663	597	394	226	260	210
30	70	191	102	249	---	519	610	891	188	235	200	210
31	69	---	95	274	---	448	---	983	---	232	145	---
TOTAL	2468	4158	4017	6641	14670	19196	34106	15209	8620	6532	6760	6195
MEAN	79.6	139	130	214	524	619	1137	491	287	211	218	207
MAX	147	360	371	741	1420	1660	4740	1570	712	383	427	293
MIN	67	65	88	90	240	306	300	238	130	145	97	100

CAL YR 1982 TOTAL 87640 MEAN 240 MAX 3660 MIN 49
WTR YR 1983 TOTAL 128572 MEAN 352 MAX 4740 MIN 65

01397380 BUSHKILL BROOK AT ROCKEFELLOWS MILLS, NJ

LOCATION.--Lat 40°31'15", long 74°49'40", Hunterdon County, Hydrologic Unit 02030501, at bridge on unnamed road in Rockefellows Mills, 200 ft upstream from mouth, and 1.5 mi west of Three Bridges.

DRAINAGE AREA.--4.31 mi^2.

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1977 to May 1983 (discontinued).

COOPERATION.--Field data and samples for laboratory analyses supplied by New Jersey Department of Environmental Protection, Division of Water Resources. Analyses of fecal coliform and fecal streptococci by the MPN method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, FECAL, EC BROTH (MPN)	STREPTOCOCCI FECAL (MPN)	HARDNESS (MG/L AS CACO3)
JAN									
26...	1145	586	7.5	4.5	10.8	E1.6	20	70	180
APR									
06...	1315	554	7.7	11.0	9.8	E1.8	<20	<2	200
MAY									
23...	1015	436	7.5	15.5	8.7	3.7	9200	>2400	140

DATE	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	SULFIDE TOTAL (MG/L AS S)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)
JAN									
26...	54	10	35	2.5	65	--	96	53	.10
APR									
06...	61	11	27	2.3	76	--	110	38	.10
MAY									
23...	43	7.4	19	2.6	68	<.5	74	30	.10

DATE	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHATE, TOTAL (MG/L AS PO4)	CARBON, ORGANIC TOTAL (MG/L AS C)
JAN									
26...	12	310	.020	3.50	.210	.71	4.2	.80	4.9
APR									
06...	13	320	.030	2.40	.320	.63	3.0	.95	4.2
MAY									
23...	11	265	.140	E2.60	.640	E.92	--	.73	6.2

01397380 BUSHKILL BROOK AT ROCKEFELLOWS MILLS, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
MAY								
23...	1015	90	2	<10	100	1	<10	20

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
MAY								
23...	490	7	90	<.1	5	1	50	<1

01397400 SOUTH BRANCH RARITAN RIVER AT THREE BRIDGES, NJ

LOCATION.--Lat 40°31'01", long 74°48'12", Hunterdon County, Hydrologic Unit 02030105, at bridge on Main Street in Three Bridges, 0.4 mi northeast of Voorhees Corner, 1.3 mi downstream of Bushkill Brook, and 2.2 mi southeast of Darts Mills.

DRAINAGE AREA.--181 mi².

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976 to current year.

COOPERATION.--Field data and samples for laboratory analyses supplied by New Jersey Department of Environmental Protection, Division of Water Resources. Analyses of fecal coliform and fecal streptococci by the MPN method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN DEMAND, BIO-CHEM ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
JAN									
26...	1030	348	262	7.6	1.5	12.5	E1.5	46	920
APR									
06...	1130	435	203	7.8	8.5	11.7	E2.1	310	9
MAY									
23...	1145	1270	168	7.6	15.5	9.8	3.8	>24000	>2400
JUL									
13...	1215	211	215	8.4	24.0	9.7	E1.9	1100	70
AUG									
03...	1245	208	190	8.4	24.0	8.0	E1.9	170	240

DATE	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
JAN									
26...	69	17	6.4	16	1.8	40	24	24	<.10
APR									
06...	66	16	6.3	9.0	1.3	41	23	14	<.10
MAY									
23...	53	13	5.1	6.6	1.7	38	15	8.6	<.10
JUL									
13...	--	--	--	--	--	--	--	--	--
AUG									
03...	74	18	7.0	8.5	1.5	53	22	13	<.10

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHATE, TOTAL (MG/L AS PO4)	CARBON, ORGANIC TOTAL (MG/L AS C)
JAN									
26...	9.6	142	.010	1.60	.210	.48	2.1	.44	4.0
APR									
06...	10	120	.010	1.40	.130	.24	1.6	.21	1.8
MAY									
23...	6.9	88	.030	E1.00	.200	E1.5	--	.52	4.9
JUL									
13...	--	--	.020	.800	.050	.42	1.1	.40	4.6
AUG									
03...	6.6	118	.020	.700	.050	.32	1.0	.25	2.6

01398000 NESHANIC RIVER AT REAVILLE, NJ

LOCATION.--Lat 40°28'18", long 74°49'42", Hunterdon County, Hydrologic Unit 02030105, on left bank 50 ft downstream from highway bridge, 0.6 ft southwest of Reaville, 1.5 mi downstream from Third Neshanic River, and 2.2 mi upstream from Back Brook.

DRAINAGE AREA.--25.7 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1930 to current year.

REVISED RECORDS.--WSP 1552: 1933, 1934(M), 1936(M), 1938, 1940(M), 1942(M), 1945-46, 1951, 1952(M).

GAGE.--Water-stage recorder. Concrete control since Sept. 26, 1935. Datum of gage is 109.46 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records good.

AVERAGE DISCHARGE.--53 years, 36.0 ft³/s, 19.01 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,900 ft³/s Aug. 28, 1971, gage height, 13.84 ft, from high-water mark in gage house, from rating curve extended above 1,700 ft³/s on basis of slope-area measurement 0.7 mi downstream (adjusted to present site) at gage height 11.90 ft; no flow many days 1965, 1966, and part of July 17, 1968.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,600 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Mar. 21	1315	1860	7.52	Apr. 10	1345	3300	9.07
Mar. 28	0030	2240	7.99	Apr. 16	1045	*3470	9.22
Apr. 3	0945	1750	7.34	May 26	2230	1730	7.30

Minimum discharge, 0.02 ft³/s July 29, gage height, 2.01 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.3	1.2	47	9.5	33	120	48	36	56	6.3	2.0	9.3
2	1.1	1.0	54	9.0	82	318	40	32	43	5.7	1.5	6.4
3	.96	1.0	31	8.5	217	95	511	29	34	4.4	1.2	3.3
4	.93	1.4	26	7.0	79	66	119	31	52	3.9	1.0	2.1
5	.94	13	20	12	49	51	78	24	44	3.9	1.0	1.6
6	.91	4.1	21	44	39	44	62	20	40	3.5	1.4	1.2
7	.93	2.6	16	24	39	49	54	18	33	3.2	1.1	.86
8	.90	2.3	13	20	32	94	143	17	25	3.2	.86	.68
9	.85	2.1	12	16	27	94	154	16	19	3.0	.70	.58
10	.81	1.8	9.8	28	21	211	997	14	17	2.6	.61	.54
11	.75	1.6	10	338	12	102	214	13	15	2.6	9.0	.54
12	.84	1.7	8.8	74	20	193	119	12	13	2.6	9.7	1.6
13	1.0	59	5.5	46	26	83	82	11	11	2.4	1.9	2.5
14	1.3	19	6.3	34	21	62	66	11	9.5	2.4	1.3	.97
15	1.1	12	7.4	37	20	52	59	11	9.2	2.1	1.1	.71
16	.95	8.1	85	34	21	42	1480	27	7.9	2.1	.95	.63
17	.91	6.7	45	26	28	36	213	31	7.2	1.9	.86	.62
18	.81	5.7	28	20	49	182	124	14	7.0	1.8	.75	.61
19	.81	4.9	23	17	60	414	142	12	6.7	1.7	.74	.64
20	.88	4.3	24	14	52	111	168	14	12	3.7	.60	.44
21	1.0	4.1	22	13	65	583	102	23	40	1.7	.54	18
22	1.0	4.0	18	12	121	168	76	40	13	1.5	.48	29
23	.96	3.7	16	54	155	90	62	183	9.1	1.1	.42	2.8
24	.88	3.4	17	138	135	69	168	57	7.7	2.0	.54	1.7
25	3.8	2.7	15	90	106	55	383	35	6.4	2.4	.46	1.3
26	15	2.6	15	67	75	45	110	286	5.3	1.5	.66	1.1
27	3.7	2.5	13	49	59	179	78	254	4.9	1.2	1.8	1.1
28	2.0	2.5	13	40	58	422	62	80	12	.96	30	.99
29	1.6	63	14	33	---	98	51	80	21	.90	123	.83
30	1.4	27	11	31	---	69	43	145	11	5.7	33	2.8
31	1.4	---	9.8	40	---	57	---	79	---	14	14	---
TOTAL	51.72	269.0	656.6	1385.0	1701	4254	6008	1655	591.9	95.96	243.17	95.44
MEAN	1.67	8.97	21.2	44.7	60.8	137	200	53.4	19.7	3.10	7.84	3.18
MAX	15	63	85	338	217	583	1480	286	56	14	123	29
MIN	.75	1.0	5.5	7.0	12	36	40	11	4.9	.90	.42	.44
CFSM	.06	.35	.82	1.74	2.37	5.33	7.78	2.08	.77	.12	.31	.12
IN.	.07	.39	.95	2.00	2.46	6.16	8.70	2.40	.86	.14	.35	.14

CAL YR 1982 TOTAL 11681.00 MEAN 32.0 MAX 1250 MIN .62 CFSM 1.25 IN. 16.91
WTR YR 1983 TOTAL 17006.79 MEAN 46.6 MAX 1480 MIN .42 CFSM 1.81 IN. 24.62

01398000 NESHANIC RIVER AT REAVILLE, NJ--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1957, 1962, 1979 to current year.

COOPERATION.--Field data and samples for laboratory analyses supplied by New Jersey Department of Environmental Protection Division of Water Resources. Analyses of fecal coliform and fecal streptococci by the MPN method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)	HARD-NESS (MG/L AS CACO3)
JAN 26...	1300	60	397	7.6	3.0	12.4	E1.9	26	>2400	93
APR 07...	1000	53	212	7.8	9.5	12.0	E2.1	1300	23	68
MAY 19...	1250	12	380	8.5	15.5	14.8	E2.2	330	33	110
JUL 13...	1330	1.3	518	9.1	29.0	13.0	2.6	1300	23	160
AUG 03...	1400	1.1	--	9.2	30.0	12.2	3.1	220	27	120

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFIDE TOTAL (MG/L AS S)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
JAN 26...	24	8.0	32	2.0	25	--	32	57	<.10
APR 07...	17	6.3	11	1.5	28	--	31	15	<.10
MAY 19...	28	9.2	30	1.6	52	<.5	39	62	.10
JUL 13...	42	14	40	2.2	81	--	55	81	.20
AUG 03...	31	11	27	4.6	79	--	45	52	.10

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHATE, TOTAL (MG/L AS PO4)	CARBON, ORGANIC TOTAL (MG/L AS C)
JAN 26...	11	186	.010	4.40	.150	E.41	--	.28	3.5
APR 07...	13	123	.010	2.80	.060	.25	3.1	.18	2.5
MAY 19...	3.9	258	.020	.900	.100	.45	1.4	.33	3.5
JUL 13...	8.0	352	.050	.400	.050	.92	1.3	.46	4.6
AUG 03...	7.5	270	.040	.300	<.050	.75	1.1	.40	4.2

01398000 NESHANIC RIVER AT READVILLE, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
MAY								
19...	1250	80	1	<10	40	<1	<10	7

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
MAY								
19...	150	4	<10	.1	5	<1	10	1

01398045 BACK BROOK TRIBUTARY NEAR RINGOES, NJ

LOCATION.--Lat 40°25'41", long 74°49'52", Hunterdon County, Hydrologic Unit 02030105, on right upstream wingwall of bridge on Wertsville Road, 2.1 mi east of Ringoes, 1.3 mi upstream from Back Brook, and 2.3 mi southwest of Wertsville.

DRAINAGE AREA.--1.98 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1977 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Altitude of gage is 156 ft, from topographic map.

REMARKS.--Water-discharge records fair except those below 1.0 ft³/s, which are poor.

AVERAGE DISCHARGE.--6 years, 4.93 ft³/s, 33.81 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,290 ft³/s Aug. 3, 1979, gage height, 5.05 ft, from rating curve extended above 200 ft³/s on basis of contracted-opening measurement at gage height 4.64 ft; minimum daily, 0.01 ft³/s Feb. 19, 1979, Sept. 14, 22, 1981, and Oct. 1, 3-5, 1981.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 500 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)
Apr. 16	0530	*504	2.96

Minimum discharge, 0.02 ft³/s, part or all of many days, gage height 0.52 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.03	.06	3.3	.61	1.6	22	1.8	2.2	2.4	.26	.05	.03
2	.03	.06	2.7	.61	7.9	29	1.3	1.9	1.7	.21	.04	.03
3	.03	.06	1.3	.58	18	6.5	58	1.6	1.2	.16	.03	.03
4	.03	.11	1.1	.53	5.0	4.0	7.7	2.3	4.1	.14	.03	.03
5	.03	.52	.85	1.9	2.2	2.7	4.5	1.5	2.8	.13	.03	.03
6	.03	.19	.98	4.8	1.4	2.1	3.2	1.2	14	.12	.03	.03
7	.03	.15	.77	1.9	2.1	3.6	2.6	1.1	5.2	.10	.03	.03
8	.03	.16	.71	1.3	1.1	10	17	1.2	2.5	.10	.03	.03
9	.03	.16	.66	1.0	.98	8.5	12	1.1	1.4	.10	.03	.03
10	.03	.16	.61	22	.89	18	67	1.1	1.1	.08	.03	.02
11	.03	.17	.61	30	4.0	8.4	12	1.1	.94	.06	.39	.02
12	.03	.20	.60	5.5	17	17	6.3	1.1	.81	.06	.09	.04
13	.03	2.8	.55	2.5	3.4	5.8	4.2	1.0	.71	.06	.03	.05
14	.04	.47	.53	1.6	.91	3.7	3.1	.86	.64	.06	.03	.04
15	.03	.30	.52	2.5	.87	2.7	2.9	.80	.58	.06	.03	.03
16	.03	.26	6.4	2.4	.95	1.9	129	4.6	.54	.06	.03	.03
17	.04	.25	2.2	1.6	1.5	1.7	12	3.7	.55	.05	.03	.03
18	.04	.20	1.1	1.2	3.7	30	7.2	1.3	.54	.05	.03	.03
19	.04	.23	.93	.71	4.4	34	9.4	.88	.50	.06	.02	.03
20	.04	.25	.96	.57	3.8	7.0	13	1.2	.92	.07	.02	.03
21	.04	.25	.91	.53	5.8	57	6.9	2.0	2.9	.06	.02	.37
22	.04	.25	.80	.49	11	9.6	4.5	5.7	.77	.07	.02	.11
23	.04	.32	.81	8.2	14	4.7	3.4	8.8	.53	.05	.02	.02
24	.04	.30	.91	16	11	3.2	29	2.4	.41	.07	.02	.02
25	.16	.30	.81	6.6	8.4	2.2	51	1.3	.33	.08	.02	.02
26	1.3	.31	.79	4.0	4.9	1.6	9.4	11	.28	.06	.02	.02
27	.10	.37	.71	2.4	3.5	38	5.7	13	.25	.05	.02	.02
28	.07	.42	.72	1.8	4.4	19	4.4	3.7	.66	.05	.02	.02
29	.05	5.7	.72	1.2	---	5.8	3.2	4.0	.72	.05	.06	.02
30	.05	1.1	.63	1.5	---	3.3	2.6	8.1	.31	.13	.03	.04
31	.06	---	.61	2.2	---	2.3	---	3.8	---	.13	.03	---
TOTAL	2.60	16.08	35.80	128.73	144.70	365.3	494.3	95.54	50.29	2.79	1.31	1.28
MEAN	.08	.54	1.15	4.15	5.17	11.8	16.5	3.08	1.68	.09	.04	.04
MAX	1.3	5.7	6.4	30	18	57	129	13	14	.26	.39	.37
MIN	.03	.06	.52	.49	.87	1.6	1.3	.80	.25	.05	.02	.02
CFSM	.04	.27	.58	2.10	2.61	5.96	8.33	1.56	.85	.05	.02	.02
IN.	.05	.30	.67	2.42	2.72	6.86	9.29	1.79	.94	.05	.02	.02

CAL YR 1982 TOTAL 829.75 MEAN 2.27 MAX 96 MIN .02 CFSM 1.15 IN. 15.59
WTR YR 1983 TOTAL 1338.72 MEAN 3.67 MAX 129 MIN .02 CFSM 1.85 IN. 25.15

01398102 SOUTH BRANCH RARITAN RIVER AT SOUTH BRANCH, NJ

LOCATION.--Lat 40°32'48", long 74°41'48", Somerset County, Hydrologic Unit 02030105, at bridge on Studdiford Drive in South Branch, 6.8 mi upstream from mouth, and 2.7 mi southeast of Readington.

DRAINAGE AREA.--265 mi².

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976 to May 1983 (discontinued).

COOPERATION.--Field data and samples for laboratory analyses supplied by New Jersey Department of Environmental Protection, Division of Water Resources. Analyses of fecal coliform and fecal streptococci by the MPN method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, FECAL, EC BROTH (MPN)	STREPTOCOCCI FECAL (MPN)
FEB									
24...	1230	--	195	6.5	4.0	14.4	E2.4	70	350
APR									
06...	1000	950	197	7.8	8.5	11.7	E1.7	130	130
MAY									
23...	1300	--	142	7.5	16.5	9.3	5.2	16000	>2400

DATE	HARDNESS (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)
FEB									
24...	61	15	5.8	9.4	2.0	31	23	17	<.10
APR									
06...	66	16	6.3	9.1	1.5	35	24	14	<.10
MAY									
23...	44	11	4.1	5.7	2.2	30	15	6.9	<.10

DATE	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHATE, TOTAL (MG/L AS PO4)	CARBON, ORGANIC TOTAL (MG/L AS C)
FEB									
24...	9.5	117	.010	2.70	.140	.98	3.7	.30	3.0
APR									
06...	11	126	.020	2.00	.130	.33	2.3	.21	2.6
MAY									
23...	7.0	126	.050	E1.10	.210	E.33	--	.73	6.1

01398107 HOLLAND BROOK AT READINGTON, NJ

LOCATION.--Lat 40°33'30", long 74°43'50", Somerset County, Hydrologic Unit 02030105, on right bank 15 ft downstream from bridge on Old York Road, 0.9 mi southeast of Readington, and 2.5 mi upstream from mouth.

DRAINAGE AREA.--9.00 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1978 to current year.

REVISED RECORDS.--WDR NJ-80-1: 1978, 1979(P). WDR NJ-82-1: Drainage area.

GAGE.--Water-stage recorder, crest-stage gage and concrete parking-block control. Datum of gage is 77.65 ft National Geodetic Vertical Datum of 1929 (levels by Somerset County).

REMARKS.--Water-discharge records fair.

AVERAGE DISCHARGE.--5 years, 15.0 ft^3/s, 22.63 in/yr.

COOPERATION.--Gage-height record collected in cooperation with Somerset County.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,090 ft^3/s May 11, 1981, gage height, 7.22 ft; minimum, 0.22 ft^3/s Aug. 28, 1980, gage height, 1.61 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 400 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 19	0050	435	4.48	Apr. 10	1355	735	5.78
Mar. 21	1325	496	4.75	Apr. 16	0835	*863	6.34
Mar. 28	0050	487	4.71	May 26	2245	526	4.88
Apr. 3	0930	415	4.39				

Minimum discharge, 0.56 ft^3/s Oct. 24, gage height, 1.65 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.2	1.0	9.7	3.9	13	51	18	14	26	3.0	1.1	.86
2	.96	1.0	11	3.7	20	118	15	12	19	2.6	1.1	.78
3	.95	1.0	8.9	3.5	52	35	140	11	16	2.3	.95	.77
4	1.0	1.2	8.0	2.9	30	26	52	11	20	2.1	.97	.78
5	.97	4.4	6.9	4.6	20	19	32	8.9	14	2.1	.99	.77
6	.90	1.4	6.8	11	15	17	24	7.7	18	2.0	.98	.73
7	.90	1.0	5.7	9.0	14	22	20	7.0	14	1.7	.94	.75
8	.91	1.0	5.0	8.1	12	31	45	6.6	12	1.6	.85	.72
9	.90	.98	4.7	6.9	9.5	39	66	6.2	9.4	1.6	.84	.77
10	.89	.90	4.3	12	7.7	95	243	5.6	8.4	1.6	.79	.78
11	.85	.91	4.6	96	4.6	41	91	5.2	7.6	1.5	6.4	.72
12	.90	1.0	4.0	29	7.0	33	46	4.9	6.7	1.5	3.0	1.1
13	.99	14	3.2	18	9.6	24	31	4.6	5.9	1.5	1.2	1.1
14	1.1	4.6	2.4	13	8.4	19	25	4.4	5.3	1.3	1.0	.89
15	.96	3.3	2.5	13	7.6	16	21	4.5	4.7	1.3	.98	.81
16	.93	2.6	14	11	8.0	13	379	7.2	4.2	1.3	.99	.82
17	.87	2.3	11	8.7	11	12	93	7.3	3.8	1.2	.95	.85
18	.82	2.0	8.7	6.7	18	69	48	4.6	3.7	1.1	.96	.82
19	.90	1.8	7.6	5.8	23	183	40	4.2	3.6	1.5	.93	.81
20	.90	1.7	7.2	4.9	20	52	35	5.3	4.7	2.3	.87	.81
21	.94	1.7	6.2	4.7	25	175	28	13	4.8	1.5	.79	6.0
22	.87	1.8	5.2	4.4	45	76	23	16	3.6	1.5	.77	4.2
23	.88	1.8	4.9	16	57	38	20	51	3.2	1.3	.79	.94
24	.90	1.7	4.9	48	48	27	31	21	2.9	2.0	.74	.85
25	1.8	1.5	4.9	40	40	21	88	15	2.7	1.8	.80	.83
26	3.6	1.6	5.0	30	31	17	42	102	2.5	1.5	.84	.90
27	1.7	1.6	4.6	22	23	45	29	112	2.4	1.3	.80	.90
28	1.3	1.7	4.7	18	22	130	23	57	8.6	1.2	.87	.90
29	1.1	16	4.7	14	---	42	18	45	6.5	1.1	2.9	.82
30	1.1	8.1	4.0	13	---	28	16	62	3.3	2.6	1.2	1.2
31	1.1	---	3.7	14	---	22	---	40	---	2.3	.90	---
TOTAL	34.09	85.59	189.0	495.8	601.4	1536	1782	676.2	247.5	53.2	38.19	33.98
MEAN	1.10	2.85	6.10	16.0	21.5	49.5	59.4	21.8	8.25	1.72	1.23	1.13
MAX	3.6	16	14	96	57	183	379	112	26	3.0	6.4	6.0
MIN	.82	.90	2.4	2.9	4.6	12	15	4.2	2.4	1.1	.74	.72
CFSM	.12	.32	.68	1.78	2.39	5.50	6.60	2.42	.92	.19	.14	.13
IN.	.14	.35	.78	2.05	2.49	6.35	7.37	2.79	1.02	.22	.16	.14

CAL YR 1982 TOTAL 4367.09 MEAN 12.0 MAX 390 MIN .66 CFSM 1.33 IN. 17.08
WTR YR 1983 TOTAL 5772.95 MEAN 15.8 MAX 379 MIN .72 CFSM 1.76 IN. 22.58

01398260 NORTH BRANCH RARITAN RIVER NEAR CHESTER, NJ

LOCATION.--Lat 40°46'16", long 74°37'34", Morris County, Hydrologic Unit 02030105, at bridge on State Route 24, 0.8 mi upstream from Burnett Brook, and 3.8 mi east of Chester.

DRAINAGE AREA.--7.57 mi².

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1964-65, 1967, 1976 to current year.

COOPERATION.--Field data and samples for laboratory analyses supplied by New Jersey Department of Environmental Protection, Division of Water Resources. Analyses of fecal coliform and fecal streptococci by the MPN method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, FECAL, EC BROTH (MPN)	STREPTOCOCCI FECAL (MPN)	HARDNESS (MG/L AS CACO3)
FEB										
09...	1100	14	219	7.2	1.0	15.0	E2.2	50	7	56
APR										
04...	1040	60	136	7.0	8.0	12.0	E1.9	330	49	39
MAY										
24...	1140	44	153	6.9	15.0	10.5	E1.9	130	41	45
JUL										
19...	1200	4.4	266	--	21.0	6.1	E7.5	210	540	84
AUG										
22...	1120	3.8	252	6.6	18.0	8.6	E2.1	110	94	84
SEP										
29...	1045	4.2	305	7.5	12.0	8.8	E2.1	50	>2400	90

DATE	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	SULFIDE TOTAL (MG/L AS S)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)
FEB									
09...	14	5.1	15	1.4	35	--	15	27	<.10
APR									
04...	9.7	3.7	9.9	1.0	21	--	15	17	<.10
MAY									
24...	11	4.2	9.7	1.1	27	<.5	17	17	<.10
JUL									
19...	20	8.3	20	2.6	52	--	19	26	.10
AUG									
22...	21	7.7	17	2.3	53	--	20	25	<.10
SEP									
29...	22	8.6	23	3.1	63	--	23	28	.10

DATE	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHATE, TOTAL (MG/L AS PO4)	CARBON, ORGANIC TOTAL (MG/L AS C)
FEB									
09...	16	122	.010	1.10	.810	1.1	2.3	.70	1.9
APR									
04...	12	96	.010	.700	E.310	.68	1.4	.40	3.0
MAY									
24...	14	104	.030	.800	.440	E.75	--	1.04	3.4
JUL									
19...	20	169	.500	--	--	--	--	2.79	2.8
AUG									
22...	18	155	.400	3.20	.190	.69	3.9	1.96	3.0
SEP									
29...	19	186	.190	3.60	.460	.46	4.1	3.37	3.8

01398260 NORTH BRANCH RARITAN RIVER NEAR CHESTER, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
MAY								
24...	1140	<10	<1	<10	40	2	20	6

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
MAY								
24...	300	2	10	<.1	4	<1	10	3

01398500 NORTH BRANCH RARITAN RIVER NEAR FAR HILLS, NJ

LOCATION.--Lat 40°42'30", long 74°38'11", Somerset County, Hydrologic Unit 02030105, on left bank 75 ft upstream from Ravine Lake Dam, 1.6 mi north of Far Hills, and 2.3 mi upstream from Peapack Brook. Water-quality samples collected at bridge 900 ft downstream from gage.

DRAINAGE AREA.--26.2 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1921 to September 1975, October 1977 to current year. Operated as crest-stage gage water years 1976-77. Monthly discharge only for some periods, published in WSP 1302.

REVISED RECORDS.--WSP 781: Drainage area. WSP 1552: 1922-23, 1924-25(M), 1935(M). WSP 1902: 1954.

GAGE.--Water-stage recorder and crest-stage gage above masonry dam. Datum of gage is 224.49 ft National Geodetic Vertical Datum of 1929 (New Jersey Geological Survey bench mark). Prior to June 18, 1925, nonrecording gage in stilling box at left end of dam at same datum.

REMARKS.--Water-discharge records fair. No gage-height record Oct. 1-Nov. 5, Jan. 6-24, Feb. 13-Mar. 2, and Apr. 8-10. Records given herein include diversion by small turbine at dam and returned to river 1,000 ft downstream from Ravine Lake Dam. Flow regulated occasionally by operation of waste gate in dam (no gate opening this year).

COOPERATION.--Gage-height record collected in cooperation with Somerset County.

AVERAGE DISCHARGE.--60 years (water years 1922-75, 1978-83) 47.7 ft^3/s, 24.72 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,390 ft^3/s Aug. 28, 1971, gage height, 7.28 ft, from rating curve extended above 2,000 ft^3/s on basis of computation of peak flow over dam; no flow at times when Ravine Lake was filling.

EXTREMES OUTSIDE PERIOD OF RECORD.--Stage of 7.6 ft, from floodmark, occurred July 23, 1919, discharge about 7,000 ft^3/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 700 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 19	0130	842	3.54	Apr. 10	Unknown	1200	Unknown
Mar. 21	1500	785	3.47	Apr. 16	1115	*1820	4.52
Mar. 28	0115	1020	3.75	May 26	2330	989	3.71
Apr. 3	1030	927	3.64	Aug. 11	1700	712	3.39

Minimum discharge, 6.4 ft^3/s Sept. 21, gage height, 1.81 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	12	26	17	38	60	161	101	99	31	18	11
2	12	12	34	17	43	122	158	95	88	30	15	9.5
3	11	11	24	17	142	61	453	91	80	27	14	9.2
4	11	13	23	15	54	52	223	97	151	25	12	9.4
5	10	46	21	17	44	50	191	83	93	24	12	9.6
6	10	26	22	29	41	52	177	76	78	23	12	8.9
7	10	17	21	23	44	67	172	71	75	21	12	8.7
8	10	15	17	19	41	84	271	70	63	20	10	7.9
9	11	12	16	18	38	90	380	72	57	19	9.5	7.4
10	12	11	14	20	33	135	560	64	55	19	8.9	7.3
11	9.8	9.2	15	118	31	88	206	62	53	17	156	7.3
12	9.8	9.0	15	44	31	115	154	59	50	17	58	8.3
13	10	80	12	35	41	78	131	58	49	17	30	14
14	12	32	12	27	42	73	116	57	47	16	18	9.3
15	11	17	14	28	45	70	111	59	46	15	16	7.9
16	10	16	77	27	47	64	826	79	43	15	13	7.4
17	9.8	15	46	25	51	62	323	92	42	13	12	7.3
18	9.7	13	28	23	57	140	223	59	40	13	13	7.5
19	9.5	13	23	22	58	411	211	56	46	24	13	7.4
20	9.7	13	23	55	52	152	217	87	51	41	12	6.9
21	10	13	22	78	51	340	206	86	44	20	11	12
22	10	13	20	74	62	179	163	84	40	20	11	50
23	9.4	14	18	77	78	148	135	207	37	16	10	15
24	9.0	13	24	70	80	143	186	74	35	18	9.6	9.9
25	12	12	24	48	67	138	219	63	32	24	9.2	8.7
26	30	12	22	41	58	136	138	190	29	18	9.0	8.5
27	19	12	19	36	50	183	121	275	25	15	8.9	9.1
28	14	12	19	33	52	429	117	108	64	15	9.0	8.5
29	13	65	20	32	---	206	112	125	83	14	18	8.2
30	12	35	18	32	---	176	107	170	87	14	20	10
31	12	---	17	39	---	170	---	108	---	39	12	---
TOTAL	361.7	593.2	706	1156	1471	4274	6768	2978	1782	640	592.1	312.1
MEAN	11.7	19.8	22.8	37.3	52.5	138	226	96.1	59.4	20.6	19.1	10.4
MAX	30	80	77	118	142	429	826	275	151	41	156	50
MIN	9.0	9.0	12	15	31	50	107	56	25	13	8.9	6.9
CFSM	.45	.76	.87	1.42	2.00	5.27	8.63	3.67	2.27	.79	.73	.40
IN.	.51	.84	1.00	1.64	2.09	6.07	9.61	4.23	2.53	.91	.84	.44

CAL YR 1982 TOTAL 14296.8 MEAN 39.2 MAX 564 MIN 7.8 CFSM 1.50 IN. 20.30
WTR YR 1983 TOTAL 21634.1 MEAN 59.3 MAX 826 MIN 6.9 CFSM 2.26 IN. 30.72

01399120 NORTH BRANCH RARITAN RIVER AT BURNT MILLS, NJ

LOCATION.--Lat 40°38'09", long 74°40'56", Somerset County, Hydrologic Unit 02030105, at bridge on Burnt Mills Road in Burnt Mills, 0.1 mi upstream from Lamington River, and 4.0 mi southwest of Far Hills.

DRAINAGE AREA.--63.8 mi².

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1964, 1977 to current year.

COOPERATION.--Field data and samples for laboratory analyses supplied by New Jersey Department of Environmental Protection, Division of Water Resources. Analyses of fecal coliform and fecal streptococci by the MPN method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)	HARD-NESS (MG/L AS CACO3)
FEB										
17...	1300	70	340	8.1	.0	10.7	E1.5	80	21	79
APR										
07...	1300	176	179	7.9	10.0	11.7	E1.7	80	23	57
JUN										
01...	1130	256	162	6.9	14.5	11.4	E1.9	20	350	59
JUL										
20...	1330	33	207	8.8	25.5	8.8	3.1	1700	920	71
AUG										
25...	1100	23	248	9.0	23.0	10.2	E1.8	70	70	83
SEP										
29...	1200	22	249	8.8	15.0	12.2	E1.5	460	540	88

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFIDE TOTAL (MG/L AS S)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
FEB									
17...	20	7.0	26	1.1	39	--	19	45	<.10
APR									
07...	14	5.3	9.2	1.1	35	--	19	16	<.10
JUN									
01...	15	5.3	9.4	1.1	37	--	18	14	<.10
JUL									
20...	18	6.3	11	1.6	49	--	19	18	.10
AUG									
25...	21	7.4	12	1.7	60	--	20	21	.10
SEP									
29...	22	8.1	14	2.0	63	<.5	21	22	.10

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC , TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHATE, TOTAL (MG/L AS PO4)	CARBON, ORGANIC TOTAL (MG/L AS C)
FEB									
17...	13	190	.010	1.20	.300	.88	2.1	.24	1.7
APR									
07...	14	101	.010	.900	.050	.24	1.1	.18	2.3
JUN									
01...	15	102	--	.800	E.050	.41	1.1	--	3.6
JUL									
20...	13	140	.030	.800	<.050	.41	1.1	E2.42	4.3
AUG									
25...	8.6	138	.020	.600	<.050	.45	1.1	.37	--
SEP									
29...	11	147	.010	1.40	<.050	.25	1.7	.55	3.0

01399120 NORTH BRANCH RARITAN RIVER AT BURNT MILLS, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	NITROGEN, NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	CARBON, INORGANIC, TOT IN BOT MAT (G/KG AS C)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (G/KG AS C)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)
SEP 29...	1200	480	.1	2.6	20	3	<1	<10	130	1	<1

DATE	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)
SEP 29...	10	4	<10	4	0	110	4900	5	10	<10	260

DATE	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	NICKEL, RECOV. FM BOTTOM MATERIAL (UG/G AS NI)	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	PHENOLS TOTAL (UG/L)	PCB, TOTAL IN BOTTOM MATERIAL (UG/KG)	PCN, TOTAL IN BOTTOM MATERIAL (UG/KG)
SEP 29...	.1	<.01	5	<10	<1	<1	30	20	<1	3	<1.0

DATE	ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDD, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIAZINON, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDOSULFAN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ETHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)
SEP 29...	<.1	1.0	.4	<.1	.7	<.1	<.1	<.1	<.1	<.1	<.1

DATE	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)	MALATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	METHOXYCHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARATHION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRITHION, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL IN BOTTOM MATERIAL (UG/KG)	PARATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	PERTHANE IN BOTTOM MATERIL (UG/KG)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)	TRITHION, TOTAL IN BOTTOM MATERIAL (UG/KG)
SEP 29...	<.1	<.1	<.1	<.1	<.1	<.1	<.1	<.1	<1.00	<10	<.1

01399190 LAMINGTON (BLACK) RIVER AT SUCCASUNNA, NJ

LOCATION.--Lat 40°51'03", long 74°38'02", Morris County, Hydrologic Unit 02030105, on right bank, 10 ft upstream from bridge on Righter Road, 0.7 mi south of Succasunna, and 0.4 mi (0.6 km) upstream from Succasunna Brook.

DRAINAGE AREA.--7.37 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1976 to current year.

GAGE.--Water-stage recorder and prefabricated concrete bumper-block control. Datum of gage is 692.92 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records fair.

AVERAGE DISCHARGE.--7 years, 11.3 ft³/s, 20.83 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 176 ft³/s Jan. 24, 1979, gage height, 5.20 ft; minimum, 1.2 ft³/s Sept. 11, 12, 1980, gage height, 2.27 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 40 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Feb. 12	0645	40	3.82	Apr. 10	1615	57	4.04
Mar. 19	0915	55	4.01	Apr. 16	1315	*88	4.41
Mar. 21	1615	56	4.03	Apr. 25	0745	55	4.02
Mar. 28	0315	48	3.93	May 26	2330	42	3.85
Apr. 3	1045	43	3.87				

Minimum discharge, 2.1 ft³/s Sept. 20, 21, gage height, 2.38 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.2	4.8	7.2	4.9	7.5	10	22	29	28	15	13	4.9
2	3.9	4.3	7.0	4.7	9.3	15	21	27	24	14	11	4.4
3	3.9	4.5	6.3	4.5	19	14	35	25	21	13	9.1	4.2
4	3.6	4.5	6.4	4.8	17	12	35	26	28	12	8.3	4.0
5	3.1	9.8	6.4	4.6	13	11	30	24	27	11	7.9	3.8
6	3.0	8.2	6.2	6.9	11	11	25	23	23	9.5	7.8	3.7
7	3.1	7.2	5.5	6.2	11	12	23	22	21	9.7	7.8	3.1
8	3.2	5.9	5.1	5.8	10	14	27	22	19	9.3	7.0	2.7
9	3.4	4.7	4.7	5.2	9.6	16	36	22	18	9.3	6.1	2.4
10	3.5	4.5	4.3	8.4	9.1	19	46	20	17	9.2	5.8	2.4
11	3.4	4.6	4.7	18	11	19	52	19	16	8.6	10	2.8
12	3.2	4.7	5.1	13	21	20	45	18	16	7.9	21	3.4
13	3.0	14	5.0	10	9.7	18	37	17	14	7.8	14	3.4
14	3.7	12	4.7	12	9.1	15	31	17	13	7.3	10	3.0
15	3.5	9.3	4.7	10	9.0	14	29	18	13	7.2	8.0	2.6
16	3.3	7.0	12	9.0	8.9	14	67	20	12	6.2	6.3	2.4
17	3.4	6.1	12	8.0	9.3	13	83	22	12	6.5	5.6	2.5
18	3.1	5.7	9.1	7.5	9.9	17	73	20	12	6.4	5.4	2.7
19	2.7	5.5	7.6	7.3	10	52	62	18	12	11	5.2	2.7
20	2.7	5.3	7.1	6.9	9.7	45	59	19	13	11	5.0	2.3
21	2.8	5.7	6.6	6.6	9.5	46	57	18	13	10	5.0	4.0
22	2.7	5.3	6.3	6.1	9.8	44	53	18	13	10	4.6	6.8
23	2.7	4.7	6.2	12	10	34	45	24	12	8.9	3.9	5.0
24	2.9	4.7	6.4	11	11	28	45	20	12	9.5	3.9	4.2
25	4.4	4.5	6.3	10	11	24	52	18	11	9.5	4.0	3.7
26	9.2	4.6	6.1	9.2	10	22	48	21	11	8.3	3.9	3.3
27	6.9	4.3	5.5	8.5	9.6	24	41	33	9.7	7.7	3.9	2.8
28	5.8	4.5	5.4	7.9	9.3	42	36	27	16	7.3	5.6	2.5
29	5.2	9.9	5.4	7.3	---	36	32	24	22	6.9	7.4	2.3
30	4.9	8.0	5.3	7.2	---	29	31	28	18	9.5	6.4	2.9
31	5.1	---	5.2	7.5	---	25	---	31	---	16	5.4	---
TOTAL	119.5	188.8	195.8	251.0	304.3	715	1278	690	496.7	295.5	228.3	100.9
MEAN	3.85	6.29	6.32	8.10	10.9	23.1	42.6	22.3	16.6	9.53	7.36	3.36
MAX	9.2	14	12	18	21	52	83	33	28	16	21	6.8
MIN	2.7	4.3	4.3	4.5	7.5	10	21	17	9.7	6.2	3.9	2.3
CFSM	.52	.85	.86	1.10	1.48	3.13	5.78	3.03	2.25	1.29	.00	.46
IN.	.60	.95	.99	1.27	1.54	3.61	6.45	3.48	2.51	1.49	1.15	.51

CAL YR 1982 TOTAL 3516.6 MEAN 9.63 MAX 36 MIN 2.7 CFSM 1.31 IN. 17.75
WTR YR 1983 TOTAL 4863.8 MEAN 13.3 MAX 83 MIN 2.3 CFSM 1.80 IN. 24.55

01399200 LAMINGTON (BLACK) RIVER NEAR IRONIA, NJ

LOCATION.--Lat 40°50'07", long 74°38'40", Morris County, Hydrologic Unit 02030105, on left bank 15 ft upstream from bridge on Ironia Road, 1.0 mi below Succasunna Brook, 1.3 mi northwest of Ironia, and 4.4 mi northeast of Chester.

DRAINAGE AREA.--10.9 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1975 to current year.

REVISED RECORDS.--WDR NJ-82-1: 1981(P).

GAGE.--Water-stage recorder and concrete block control. Datum of gage is 687.4 ft, revised, National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records fair. Water for municipal supply pumped from wells upstream of gage by Morris County Municipal Utilities Authority.

AVERAGE DISCHARGE.--8 years, 19.1 ft³/s, 23.80 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 348 ft³/s Jan. 25, 1979, gage height, 5.27 ft; minimum daily, 1.5 ft³/s Oct. 1, 1980.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 80 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Mar. 19	1400	112	4.26	Apr. 16	1930	*201	4.75
Mar. 22	0145	89	4.09	Apr. 21	2130	81	4.03
Mar. 28	1415	83	4.04	Apr. 25	1430	84	4.05
Apr. 11	0015	97	4.17				

Minimum discharge, 3.0 ft³/s Sept. 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.4	6.5	16	9.2	16	16	35	44	44	22	22	8.7
2	8.4	5.6	14	9.1	18	32	32	42	38	19	17	7.4
3	7.9	5.5	11	9.0	45	30	57	40	33	17	12	6.8
4	7.5	5.6	9.9	8.8	40	22	64	41	45	15	9.9	6.4
5	6.4	14	9.6	9.2	29	18	48	39	47	14	9.2	6.2
6	5.8	17	10	16	19	17	40	36	38	11	8.7	6.0
7	5.5	13	9.3	15	18	21	36	34	34	11	8.6	5.6
8	5.5	9.7	8.4	13	18	23	41	34	31	10	8.1	4.9
9	5.7	8.0	7.6	11	17	31	64	36	26	10	7.7	4.5
10	5.9	6.7	6.3	11	15	35	72	33	23	10	6.0	4.1
11	5.7	6.2	6.7	11	12	39	86	30	22	9.6	19	4.2
12	5.7	6.3	7.4	36	12	37	65	28	21	8.5	51	4.4
13	5.3	20	7.2	19	23	33	53	27	19	8.1	23	5.9
14	6.0	28	6.6	20	20	27	46	26	17	7.5	18	4.8
15	6.0	18	6.6	24	17	22	42	27	16	7.4	13	4.1
16	5.3	13	20	17	15	20	121	33	15	6.6	10	4.0
17	5.1	9.9	33	19	15	19	139	38	15	6.6	9.6	4.1
18	4.8	9.0	19	23	17	23	101	32	15	6.7	9.2	4.4
19	4.1	8.5	14	20	18	92	85	27	16	16	8.7	4.4
20	3.8	7.9	12	16	17	76	81	31	21	36	8.5	3.8
21	3.8	8.0	11	13	16	67	81	30	20	17	8.7	4.1
22	3.8	8.1	10	12	17	77	77	29	18	16	8.0	14
23	3.6	7.3	9.7	16	20	54	64	45	16	11	6.9	9.0
24	3.9	6.7	11	14	22	44	63	36	15	11	6.5	6.3
25	4.8	6.2	11	28	20	38	80	28	13	13	6.7	5.7
26	14	6.1	11	21	18	34	70	28	12	9.9	6.4	5.3
27	15	5.9	10	18	15	35	57	69	11	8.5	6.2	4.8
28	10	5.6	10	16	15	72	52	47	20	7.8	6.9	4.5
29	8.2	11	10	15	---	59	49	40	44	7.5	16	4.2
30	7.0	21	9.9	14	---	45	46	49	32	8.9	18	4.7
31	6.7	---	9.5	16	---	39	---	51	---	27	12	---
TOTAL	200.6	304.3	347.7	499.3	544	1197	1947	1130	737	389.6	381.5	167.3
MEAN	6.47	10.1	11.2	16.1	19.4	38.6	64.9	36.5	24.6	12.6	12.3	5.58
MAX	15	28	33	36	45	92	139	69	47	36	51	14
MIN	3.6	5.5	6.3	8.8	12	16	32	26	11	6.6	6.0	3.8
CFSM	.59	.93	1.03	1.48	1.78	3.54	5.95	3.35	2.26	1.16	1.13	.51
IN.	.68	1.04	1.19	1.70	1.86	4.09	6.64	3.86	2.52	1.33	1.30	.57

CAL YR 1982 TOTAL 6352.1 MEAN 17.4 MAX 86 MIN 3.6 CFSM 1.60 IN. 21.68
WTR YR 1983 TOTAL 7845.3 MEAN 21.5 MAX 139 MIN 3.6 CFSM 1.97 IN. 26.77

01399200 LAMINGTON (BLACK) RIVER NEAR IRONIA, NJ--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1977 to current year.

COOPERATION.--Field data and samples for laboratory analyses supplied by the New Jersey Department of Environmental Protection Division of Water Resources. Analyses of fecal coliform and fecal streptococci by the MPN method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)	HARD-NESS (MG/L AS CACO3)
FEB 09...	1000	E17	373	6.3	.0	12.4	E1.9	<20	<2	99
APR 04...	1130	63	258	7.2	8.5	9.8	E2.0	140	79	72
MAY 24...	1030	36	276	7.0	16.5	6.4	E3.8	270	240	83
JUL 19...	1045	6.3	360	--	24.0	5.4	2.6	490	240	96
AUG 22...	1020	8.2	330	6.8	19.0	6.2	2.1	790	540	94

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFIDE TOTAL (MG/L AS S)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
FEB 09...	24	9.4	33	2.4	88	--	22	42	<.10
APR 04...	17	7.1	25	1.6	57	--	20	31	<.10
MAY 24...	20	8.0	24	2.0	66	<.5	17	34	<.10
JUL 19...	22	9.9	36	2.9	72	--	21	44	.10
AUG 22...	22	9.6	31	2.6	74	--	21	40	<.10

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHATE, TOTAL (MG/L AS PO4)	CARBON, ORGANIC TOTAL (MG/L AS C)
FEB 09...	10	234	.040	2.20	.320	1.0	3.2	.92	3.0
APR 04...	8.7	156	.090	1.30	E.090	.83	2.1	.45	4.3
MAY 24...	9.4	174	.070	1.21	.200	E1.1	--	1.90	7.1
JUL 19...	12	206	.300	2.20	.250	1.1	3.3	1.87	4.9
AUG 22...	11	184	.150	2.10	.110	.76	2.9	1.53	3.8

01399200 LAMINGTON (BLACK) RIVER NEAR IRONIA, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	ALUMINUM, DIS-SOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOV-ERABLE (UG/L AS BE)	BORON, TOTAL RECOV-ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)
MAY								
24...	1030	30	1	<10	70	3	20	10

DATE	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
MAY								
24...	680	21	230	<.1	1	<1	20	<1

01399500 LAMINGTON (BLACK) RIVER NEAR POTTERSVILLE, NJ

LOCATION.--Lat 40°43'39", long 74°43'50", Morris County, Hydrologic Unit 02030105, on right bank 1.1 mi upstream from bridge on State Highway 512, 1.2 mi northwest of Pottersville, and 5.5 mi upstream from Cold Brook. Water-quality sample collected at bridge 1.1 mi downstream from gage at high flows.

DRAINAGE AREA.--32.8 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1921 to current year. Monthly discharge only for October and November 1921, published in WSP 1302. Prior to October 1952, published as "Black River near Pottersville".

REVISED RECORDS.--WSP 741: 1932. WSP 781: Drainage area. WSP 1552: 1922, 1924-29(M), 1931(M), 1933-34(M), 1938(P), 1939(M), 1940, 1941(M), 1942-46(P), 1947(M), 1948-49(P), 1951-52(P), 1953(M). WDR-NJ-80-1: Correction 1979(P).

GAGE.--Water-stage recorder. Concrete control since July 1, 1937. Datum of gage is 284.14 ft National Geodetic Vertical Datum of 1929 (levels from New Jersey Geological Survey bench mark). Prior to July 1, 1922, nonrecording gage on downstream side of highway bridge at Pottersville, 1.1 mi downstream at different datum.

REMARKS.--Water-discharge records good except those for periods of ice effect Jan. 17-20 and no gage-height record Aug. 5 to Sept. 14, which are fair. Flow regulated occasionally by pond above station.

AVERAGE DISCHARGE.--62 years, 55.9 ft³/s, 23.14 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,700 ft³/s Aug. 28, 1971, gage height, 5.39 ft, from rating curve extended above 380 ft³/s on basis of slope-area measurement at gage height 4.71 ft; minimum, 1.3 ft³/s Oct. 4, 1930.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 380 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Mar. 27	2300	477	3.23	May 22	2345	413	3.08
Apr. 10	1230	540	3.34	May 26	2200	466	3.21
Apr. 16	0715	*935	3.90				

Minimum discharge, 8.8 ft³/s Sept. 19, 20, 21, gage height, 1.48 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	24	36	26	44	61	117	138	137	67	23	24
2	25	22	41	25	55	87	106	130	123	64	27	24
3	24	21	40	24	142	73	224	123	110	55	22	22
4	22	21	40	27	92	76	164	123	152	46	18	20
5	21	49	37	25	87	76	156	114	117	41	17	18
6	19	32	36	38	89	69	140	107	114	37	17	16
7	18	26	33	31	66	73	124	104	110	33	16	14
8	17	25	30	29	58	78	166	103	96	30	16	13
9	16	26	27	29	57	87	188	104	83	28	15	12
10	15	26	27	34	62	110	296	95	75	26	15	11
11	14	25	23	108	71	107	266	90	69	24	18	10
12	14	23	23	57	62	120	225	88	62	23	63	10
13	15	74	36	57	62	105	191	83	58	22	62	18
14	17	46	31	69	56	92	166	78	54	21	49	15
15	15	36	23	53	48	85	155	80	51	21	40	13
16	14	38	69	48	45	76	550	101	49	21	32	12
17	14	40	54	47	48	70	418	101	47	19	25	11
18	14	38	40	44	54	87	331	89	45	18	21	9.8
19	14	34	41	41	58	175	272	89	46	39	19	9.6
20	14	31	43	38	58	154	255	111	51	41	18	9.3
21	14	28	43	35	62	238	243	100	53	34	16	18
22	14	25	39	36	72	212	213	110	53	40	16	28
23	13	23	35	62	79	176	186	174	51	41	15	20
24	13	22	37	79	77	151	195	117	48	42	14	19
25	17	20	35	57	71	128	221	110	44	37	14	20
26	36	20	34	51	65	111	193	167	40	32	14	19
27	25	19	32	50	59	140	185	207	37	28	15	17
28	21	19	32	50	58	214	174	157	69	25	31	14
29	22	59	32	49	---	161	157	169	83	22	33	12
30	23	39	29	43	---	152	150	192	60	22	25	15
31	25	---	27	45	---	133	---	153	---	23	24	---
TOTAL	570	931	1105	1407	1857	3677	6427	3707	2187	1022	750	473.7
MEAN	18.4	31.0	35.6	45.4	66.3	119	214	120	72.9	33.0	24.2	15.8
MAX	36	74	69	108	142	238	550	207	152	67	63	28
MIN	13	19	23	24	44	61	106	78	37	18	14	9.3
CFSM	.56	.95	1.09	1.38	2.02	3.63	6.52	3.66	2.22	1.01	.74	.48
IN.	.65	1.06	1.25	1.60	2.11	4.17	7.29	4.20	2.48	1.16	.85	.54

CAL YR 1982 TOTAL 18725 MEAN 51.3 MAX 260 MIN 13 CFSM 1.56 IN. 21.24
WTR YR 1983 TOTAL 24113.7 MEAN 66.1 MAX 550 MIN 9.3 CFSM 2.02 IN. 27.35

01399500 LAMINGTON (BLACK) RIVER NEAR POTTERSVILLE, NJ--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1977 to current year.

COOPERATION.--Field data and samples for laboratory analyses supplied by the New Jersey Department of Environmental Protection, Division of Water Resources. Analyses of fecal coliform and fecal streptococci by the MPN method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, FECAL EC BROTH (MPN)	STREPTOCOCCI FECAL (MPN)
FEB 09...	1215	55	210	7.5	.0	14.4	E1.5	<20	17
APR 04...	1230	158	153	7.2	8.5	12.0	1.5	90	49
MAY 24...	1300	115	155	7.4	17.0	10.2	E2.3	130	49
JUL 20...	1045	42	198	7.9	21.0	8.7	6.0	790	>2400
AUG 22...	1245	24	222	7.0	20.0	9.5	E1.5	70	920

DATE	HARDNESS (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)
FEB 09...	52	12	5.4	17	1.1	38	15	24	<.10
APR 04...	44	10	4.5	13	1.1	30	15	18	<.10
MAY 24...	50	12	4.9	10	1.1	39	11	14	<.10
JUL 20...	61	15	5.6	13	2.0	40	21	20	.10
AUG 22...	70	17	6.7	17	1.5	59	13	26	<.10

DATE	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHATE, TOTAL (MG/L AS PO4)	CARBON, ORGANIC TOTAL (MG/L AS C)
FEB 09...	11	110	<.010	1.20	.140	.33	1.5	.18	2.5
APR 04...	5.6	87	<.010	.600	E.060	.52	1.1	.21	3.9
MAY 24...	7.1	90	<.010	.500	.110	E.48	--	.55	5.9
JUL 20...	13	113	.020	.700	<.050	.58	1.3	.46	7.1
AUG 22...	14	140	.010	.700	.090	.44	1.1	.49	4.7

01399510 UPPER COLD BROOK NEAR POTTERSVILLE, NJ

LOCATION.--Lat 40°43'16", long 74°45'09", Hunterdon County, Hydrologic Unit 02030105, on right bank along a private dirt road, 400 ft downstream from the Pottersville Reservoir, and 1.5 mi west of Pottersville.

DRAINAGE AREA.--2.18 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1972 to current year.

GAGE.--Water-stage recorder and rock outcrop control. Datum of gage is 451.57 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records fair. Flow regulated by Pottersville Reservoir, 400 ft above station, until August 1982 when dam was demolished.

AVERAGE DISCHARGE.--11 years, 3.79 ft³/s, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 197 ft³/s July 20, 1975, gage height, 2.85 ft; maximum gage height, 3.29 ft May 11, 1981; minimum daily discharge, 0.03 ft³/s Aug. 28, 29, Sept. 3, 8, 1980.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 60 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Mar. 27	2315	76	2.09	May 22	2315	101	2.04
Apr. 3	0900	63	1.89	May 26	2115	93	1.97
Apr. 10	1215	76	2.10	Aug. 11	1900	64	1.73
Apr. 16	0600	*139	2.37				

Minimum discharge, 0.23 ft³/s Sept. 11, gage height, 0.44 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.75	.80	2.2	1.4	2.4	4.5	5.6	7.1	7.3	2.4	1.0	.68
2	.65	.75	2.0	1.4	5.9	6.8	5.0	7.4	6.7	2.3	1.2	.60
3	.59	.79	1.7	1.3	17	3.9	25	6.8	6.4	2.1	.89	.56
4	.58	1.3	1.7	1.2	4.9	3.5	9.0	7.2	14	1.9	.91	.53
5	.52	2.9	1.6	1.8	3.4	3.2	7.2	6.3	7.0	1.9	.96	.52
6	.54	1.4	1.6	2.3	2.9	3.1	6.7	6.0	6.0	1.9	.90	.47
7	.55	1.1	1.4	1.7	3.2	4.5	6.6	5.7	5.6	1.8	.81	.44
8	.61	1.0	1.3	1.6	2.9	6.2	18	6.2	4.9	1.7	.74	.41
9	.59	.93	1.2	1.5	2.6	5.9	12	5.9	4.5	1.7	.71	.39
10	.57	.92	1.1	3.5	2.4	9.5	31	5.3	4.3	1.6	.66	.37
11	.52	.92	1.3	13	2.2	5.9	16	5.0	4.1	1.6	8.7	.34
12	.58	.95	1.3	3.3	3.9	6.8	12	4.6	3.8	1.6	2.1	1.2
13	.82	5.6	1.1	2.1	2.8	4.9	9.7	4.4	3.5	1.5	1.3	.80
14	.96	1.7	1.1	1.9	2.6	4.2	8.7	4.2	3.3	1.5	1.1	.55
15	.71	1.5	1.3	2.0	2.6	4.0	9.0	4.9	3.1	1.5	.95	.49
16	.65	1.3	7.7	2.0	2.7	3.8	69	9.2	2.8	1.5	.91	.49
17	.59	1.1	2.5	1.9	3.1	3.6	24	5.4	2.9	1.3	.87	.49
18	.66	1.0	2.0	1.8	3.6	9.4	18	3.7	2.9	1.2	.90	.47
19	.64	1.0	1.7	1.9	3.4	18	18	3.6	3.7	5.0	.84	.44
20	.65	1.0	1.7	1.9	3.2	7.3	19	6.9	4.3	2.0	.76	.41
21	.63	1.0	1.7	2.0	3.4	22	17	4.6	3.8	1.6	.67	2.0
22	.59	1.0	1.6	2.0	5.4	20	13	11	3.1	1.4	.65	1.1
23	.64	1.0	1.6	5.8	5.6	16	12	13	2.7	1.2	.63	.59
24	.60	.96	1.9	5.0	4.7	14	15	5.9	2.6	1.6	.59	.55
25	.80	.86	1.7	3.5	4.1	12	20	4.7	2.4	1.5	.58	.50
26	1.0	.91	1.7	2.9	3.6	11	11	20	2.3	1.2	.56	.50
27	.95	.89	1.6	2.5	3.3	18	9.4	13	2.2	1.0	.53	.49
28	.90	1.0	1.6	2.3	3.3	20	8.3	7.0	8.6	1.0	.95	.45
29	.87	6.3	1.6	2.2	---	8.6	7.6	11	4.6	.95	1.2	.44
30	.83	1.8	1.4	2.3	---	6.8	7.3	15	2.6	1.0	.85	.89
31	.82	---	1.4	2.6	---	6.1	---	8.9	---	1.0	.75	---
TOTAL	21.36	43.68	55.3	82.6	111.1	273.5	450.1	229.9	136.0	51.45	35.17	18.16
MEAN	.69	1.46	1.78	2.66	3.97	8.82	15.0	7.42	4.53	1.66	1.13	.61
MAX	1.0	6.3	7.7	13	17	22	69	20	14	5.0	8.7	2.0
MIN	.52	.75	1.1	1.2	2.2	3.1	5.0	3.6	2.2	.95	.53	.34
CFSM	.32	.67	.82	1.22	1.82	4.05	6.88	3.40	2.08	.76	.52	.28
IN.	.36	.75	.94	1.41	1.90	4.67	7.68	3.92	2.32	.88	.60	.31

CAL YR 1982 TOTAL 1106.20 MEAN 3.03 MAX 49 MIN .52 CFSM 1.39 IN. 18.88
WTR YR 1983 TOTAL 1508.32 MEAN 4.13 MAX 69 MIN .34 CFSM 1.89 IN. 25.74

01399525 LAMINGTON (BLACK) RIVER TRIBUTARY NO. 2 NEAR POTTERSVILLE, NJ

LOCATION.--Lat 40°41'48", long 74°43'05", Somerset County, Hydrologic Unit 02030105, on right upstream wingwall of bridge on Black River Road, 1.3 mi south of Pottersville, and 0.3 mi upstream from mouth.

DRAINAGE AREA.--1.22 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1977 to current year.

GAGE.--Water-stage recorder and wooden control. Datum of gage is 172.74 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records fair.

AVERAGE DISCHARGE.--6 years, 2.30 ft³/s, 25.60 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 773 ft³/s Sept. 6, 1979, gage height, 4.98 ft; no flow many days in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 200 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Mar. 27	2315	224	3.35	Apr. 16	0715	*394	4.14
Apr. 10	1230	205	3.23	May 26	1845	307	3.77

No flow many days during the year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.04	.08	1.7	.55	.53	3.2	1.3	.20	1.8	.00	.06	.00
2	.03	.08	1.3	.52	3.2	6.9	1.1	.19	1.3	.00	.05	.00
3	.03	.08	.79	.53	8.9	2.5	26	.18	1.1	.00	.04	.00
4	.03	.11	.80	.41	2.6	2.1	3.4	.20	3.4	.00	.03	.00
5	.03	.83	.65	1.2	1.7	1.8	2.2	.15	.56	.00	.05	.00
6	.03	.24	.77	2.5	1.5	1.6	1.8	.12	.36	.00	.08	.00
7	.03	.16	.59	.87	1.7	3.3	1.6	.10	.25	.00	.05	.00
8	.03	.14	.49	.70	1.5	5.8	18	.11	.11	.00	.04	.00
9	.03	.18	.43	.62	1.2	5.2	7.8	.11	.03	.00	.03	.00
10	.03	.17	.36	3.5	1.0	11	40	.09	.01	.00	.00	.00
11	.03	.16	.47	14	1.1	4.0	6.3	.08	.01	.00	1.3	.00
12	.03	.17	.43	1.1	1.3	6.8	3.5	.08	.00	.01	.19	.00
13	.04	3.2	.31	.65	1.3	2.8	2.5	.08	.00	.06	.08	.00
14	.09	.49	.28	.52	1.2	2.2	1.9	.08	.00	.05	.07	.00
15	.08	.30	.35	.64	1.3	1.9	1.8	.40	.00	.06	.07	.00
16	.08	.22	8.6	.61	1.5	1.6	80	1.0	.00	.07	.06	.00
17	.08	.20	1.5	.50	2.1	1.3	5.0	.76	.00	.04	.05	.00
18	.08	.19	.80	.44	5.0	12	2.7	.40	.00	.03	.05	.00
19	.08	.18	.72	.43	4.2	13	3.8	.35	6.6	.09	.05	.00
20	.08	.17	.83	.41	3.6	3.4	5.9	1.2	1.9	.12	.04	.00
21	.09	.17	.76	.38	4.9	27	2.3	7.6	.21	.08	.01	.79
22	.08	.18	.62	.38	7.0	4.3	1.6	9.7	.01	.08	.00	.28
23	.07	.18	.58	8.9	5.5	2.7	1.2	10	.00	.07	.00	.05
24	.07	.17	.85	8.5	3.7	2.1	4.1	2.0	.00	.10	.00	.03
25	.12	.16	.71	5.0	2.9	1.7	6.5	1.3	.00	.10	.00	.03
26	.46	.14	.74	1.1	2.1	1.4	.99	37	.00	.08	.00	.03
27	.15	.14	.62	.71	1.8	22	.37	8.2	.00	.07	.00	.03
28	.11	.16	.66	.57	1.8	12	.30	2.4	2.3	.06	.00	.03
29	.09	7.8	.66	.48	---	2.8	.25	4.3	.50	.04	.00	.02
30	.09	.93	.56	.56	---	1.9	.23	8.9	.00	.07	.00	.04
31	.09	---	.55	.73	---	1.6	---	2.6	---	.11	.00	---
TOTAL	2.40	17.38	29.48	58.01	76.13	171.9	234.44	99.88	20.45	1.39	2.40	1.33
MEAN	.08	.58	.95	1.87	2.72	5.55	7.81	3.22	.68	.04	.08	.04
MAX	.46	7.8	8.6	14	8.9	27	80	37	6.6	.12	1.3	.79
MIN	.03	.08	.28	.38	.53	1.3	.23	.08	.00	.00	.00	.00
CFSM	.06	.48	.78	1.53	2.23	4.55	6.40	2.64	.56	.04	.06	.04
IN.	.07	.53	.90	1.77	2.32	5.24	7.15	3.05	.62	.04	.07	.04

CAL YR 1982 TOTAL 559.19 MEAN 1.53 MAX 74 MIN .00 CFSM 1.25 IN. 17.05
WTR YR 1983 TOTAL 715.19 MEAN 1.96 MAX 80 MIN .00 CFSM 1.61 IN. 21.81

01399690 SOUTH BRANCH ROCKAWAY CREEK AT WHITEHOUSE, NJ

LOCATION.--Lat 40°37'24", long 74°46'01", Hunterdon County, Hydrologic Unit 02030105, on right upstream wingwall of bridge on U.S. Route 22, 0.6 mi north of Whitehouse Station, 0.9 mi west of Whitehouse, and 0.3 mi upstream from mouth.

DRAINAGE AREA.--13.2 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1964-67. March 1977 to current year.

GAGE.--Water-stage recorder. Datum of gage is 113.52 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records fair. No gage-height record, Nov. 18-Jan. 12, July 2-6, July 21-Aug. 25. Releases from Round Valley Reservoir enter stream 1,700 ft upstream of gage (see Raritan River basin, reservoirs in).

AVERAGE DISCHARGE.--6 years, 39.9 ft³/s, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,480 ft³/s Jan. 24, 1979, gage height, 12.82 ft; minimum, 0.42 ft³/s Sept. 22, 1981, gage height, 4.34 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,100 ft³/s Apr. 16, gage height, 11.53 ft; minimum, 1.9 ft³/s Sept. 12, gage height, 4.54 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	99	80	14	9.4	16	29	32	30	34	8.9	4.5	3.1
2	117	89	14	9.4	29	57	28	28	28	9.2	5.4	2.8
3	135	77	11	9.4	94	24	188	27	24	12	4.8	2.8
4	126	75	10	12	30	20	58	26	37	11	4.2	2.6
5	107	18	9.8	16	20	17	43	24	23	9.6	4.4	2.7
6	128	9.1	10	22	17	16	38	21	26	8.6	4.6	2.5
7	151	7.8	10	26	18	24	32	20	21	6.2	4.4	2.4
8	152	7.8	10	14	16	38	88	19	18	6.1	4.2	2.1
9	135	7.1	9.9	7.4	14	43	86	19	15	7.3	3.9	2.2
10	116	7.4	9.8	31	13	77	296	18	15	29	4.0	2.2
11	106	6.7	9.7	145	10	38	90	17	14	5.8	30	2.1
12	106	15	9.9	41	12	54	56	22	13	5.9	18	10
13	75	36	11	15	14	30	44	20	15	5.8	9.6	11
14	123	23	11	13	12	24	37	18	12	5.3	5.0	3.5
15	121	14	23	14	11	22	34	18	11	5.2	4.7	2.9
16	115	8.0	70	13	13	19	509	26	10	5.3	4.5	2.7
17	110	7.8	32	12	17	17	111	31	10	4.8	4.3	2.9
18	124	7.4	14	10	28	98	75	22	10	4.7	4.2	2.8
19	128	7.3	14	9.0	32	205	75	18	19	5.3	4.0	2.7
20	138	7.2	13	9.2	26	55	84	17	41	6.6	3.9	2.5
21	140	7.2	13	8.8	30	166	57	58	19	6.4	3.8	13
22	127	7.2	13	8.1	47	65	47	52	14	6.2	3.7	18
23	120	7.2	13	36	46	44	42	136	11	6.0	3.4	3.7
24	125	6.6	13	72	65	37	69	39	10	6.5	3.2	3.1
25	96	6.6	14	40	62	32	126	25	9.4	7.4	2.9	2.9
26	32	10	13	28	23	27	53	183	8.7	6.7	2.6	2.9
27	7.6	11	12	20	19	71	45	161	8.7	6.0	2.6	2.9
28	65	19	11	17	18	176	39	53	16	5.2	2.6	2.8
29	89	36	11	15	---	50	35	60	21	5.2	5.7	2.8
30	80	13	10	14	---	39	32	96	9.7	5.2	4.0	5.0
31	61	---	9.8	19	---	35	---	46	---	5.7	3.1	---
TOTAL	3354.6	634.4	448.9	715.7	752	1649	2549	1350	523.5	229.1	170.2	125.6
MEAN	108	21.4	14.5	23.1	26.9	53.2	85.0	43.5	17.4	7.39	5.65	4.19
MAX	152	89	70	145	94	205	509	183	41	29	30	18
MIN	7.6	6.6	9.7	7.4	10	16	28	17	8.7	4.7	2.6	2.1

CAL YR 1982 TOTAL 16594.0 MEAN 45.5 MAX 409 MIN 5.2
WTR YR 1983 TOTAL 12502.0 MEAN 34.3 MAX 509 MIN 2.1

01399700 ROCKAWAY CREEK AT WHITEHOUSE, NJ

LOCATION.--Lat 40°37'49", long 74°44'11", Hunterdon County, Hydrologic Unit 02030105, on right bank at bridge on Lamington Road, 1.4 mi northeast of Whitehouse, and 1.8 mi upstream from mouth.

DRAINAGE AREA.--37.1 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1959-62, 1964-65, 1973. April 1977 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 99.64 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records fair. Releases are made from Round Valley Reservoir to South Branch Rockaway Creek, 2.6 mi upstream of gage (see Raritan River basin, reservoirs in).

AVERAGE DISCHARGE.--6 years, 83.4 ft^3/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,510 ft^3/s Jan. 24, 1979, gage height, 9.55 ft; minimum, 0.90 ft^3/s Dec. 4, 1980.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,200 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 19	0230	1460	5.77	Apr. 10	1545	2120	6.97
Mar. 21	1515	1370	5.61	Apr. 16	1045	*2920	8.41
Mar. 28	0245	2010	6.77	May 23	0215	1250	5.40
Apr. 3	1100	1520	5.88	May 26	2300	1980	6.72

Minimum discharge, 5.6 ft^3/s Sept. 11, 12, gage height, 1.65 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	97	79	42	19	43	69	98	96	97	27	12	10
2	116	90	51	18	76	154	90	93	84	27	14	9.1
3	136	74	32	18	284	70	535	88	77	24	12	9.0
4	128	77	31	19	88	54	160	91	125	22	11	8.4
5	103	60	27	22	59	48	127	78	78	21	11	8.7
6	126	21	28	59	59	45	114	71	75	20	12	7.9
7	157	49	24	30	53	72	106	65	67	19	11	7.1
8	158	73	20	25	45	104	276	64	59	18	9.6	6.4
9	141	34	20	21	51	123	299	73	53	18	9.0	6.4
10	117	13	19	32	50	208	805	59	50	37	8.5	6.4
11	104	12	20	346	74	109	276	55	48	17	99	6.0
12	104	13	20	66	118	137	187	53	45	16	67	15
13	77	94	23	42	105	92	152	50	44	16	21	28
14	129	32	18	41	77	75	134	48	40	15	16	10
15	126	22	20	49	68	68	125	48	38	14	14	8.8
16	119	18	161	36	68	58	1460	67	36	15	13	8.1
17	112	17	58	41	81	54	365	85	35	13	12	8.9
18	128	16	32	36	97	223	254	49	35	13	12	9.0
19	135	16	28	31	85	638	240	46	39	14	12	8.2
20	142	15	29	31	70	182	257	68	71	25	11	7.8
21	138	15	29	33	77	462	204	117	48	15	10	18
22	122	15	29	33	117	190	156	108	39	15	10	41
23	114	15	26	128	124	136	136	361	33	12	10	12
24	120	15	33	191	129	120	197	104	30	15	9.6	9.5
25	102	13	29	103	117	109	358	75	28	18	9.2	9.1
26	55	13	27	75	66	98	153	462	27	14	9.2	9.2
27	18	13	23	50	51	147	130	439	26	12	9.1	9.1
28	63	13	23	42	51	524	119	133	41	12	9.1	8.8
29	91	138	23	40	---	140	110	149	69	12	17	8.2
30	81	40	20	38	---	115	103	233	30	12	13	13
31	64	---	19	49	---	106	---	121	---	15	10	---
TOTAL	3423	1115	984	1764	2383	4730	7726	3649	1567	543	503.3	327.1
MEAN	110	37.2	31.7	56.9	85.1	153	258	118	52.2	17.5	16.2	10.9
MAX	158	138	161	346	284	638	1460	462	125	37	99	41
MIN	18	12	18	18	43	45	90	46	26	12	8.5	6.0

CAL YR 1982 TOTAL 30601 MEAN 83.8 MAX 1740 MIN 12
WTR YR 1983 TOTAL 28714.4 MEAN 78.7 MAX 1460 MIN 6.0

01399700 ROCKAWAY CREEK AT WHITEHOUSE, NJ--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1977 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: April 1977 to September 1978.
WATER TEMPERATURES: April 1977 to September 1978.
SEDIMENT ANALYSES: October 1976 to September 1978.

COOPERATION.--Field data and samples for laboratory analyses supplied by New Jersey Department of Environmental Protection, Division of Water Resources. Analyses of fecal coliform and fecal streptococci by the MPN method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)	HARD-NESS (MG/L AS CACO3)
FEB 17...	1220	73	200	7.3	1.0	15.2	E1.7	70	46	71
APR 07...	1145	104	167	7.9	10.0	11.7	2.3	490	5	57
JUN 01...	1315	99	160	7.8	15.0	10.8	E1.8	1700	140	64
JUL 13...	1015	16	235	8.6	23.5	10.2	E2.1	1100	84	96
AUG 03...	1045	12	237	8.5	23.5	8.8	2.3	790	540	97

	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFIDE TOTAL (MG/L AS S)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
FEB 17...	17	6.9	12	1.1	44	--	21	20	<.10
APR 07...	14	5.4	7.3	1.3	36	--	20	9.7	<.10
JUN 01...	16	5.9	7.3	1.4	43	<.5	19	8.5	<.10
JUL 13...	23	9.3	8.7	1.6	73	--	21	11	.10
AUG 03...	23	9.5	8.8	1.6	77	--	20	14	.10

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHATE, TOTAL (MG/L AS PO4)	CARBON, ORGANIC TOTAL (MG/L AS C)
FEB 17...	9.6	136	<.010	1.40	.050	.34	1.7	.12	1.4
APR 07...	15	96	<.010	1.20	.060	.25	1.5	.12	2.1
JUN 01...	15	100	.010	1.10	E.050	.48	1.6	.39	2.8
JUL 13...	14	137	.020	1.50	E.050	.37	1.9	.28	2.5
AUG 03...	13	163	.030	1.20	.090	.72	1.9	.25	2.0

01399700 ROCKAWAY CREEK AT WHITEHOUSE, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
JUN								
01...	1315	130	1	10	50	1	20	2

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
JUN								
01...	780	6	50	.1	4	<1	20	<1

01399780 LAMINGTON (BLACK) RIVER AT BURNT MILLS, NJ

LOCATION.--Lat 40°38'04", long 74°41'13", Somerset County, Hydrologic Unit 02030105, at bridge on Burnt Mills Road in Burnt Mills, 1,400 ft upstream from mouth, and 2.4 mi southwest of Greater Cross Roads.

DRAINAGE AREA.--100 mi².

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1964, 1976 to current year.

COOPERATION.--Field data and samples for laboratory analyses supplied by New Jersey Department of Environmental Protection, Division of Water Resources. Analyses of fecal coliform and fecal streptococci by the MPN method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)	HARD-NESS (MG/L AS CACO3)
FEB										
17...	1110	200	222	7.1	1.5	13.4	E2.1	70	22	69
APR										
04...	1330	400	135	7.0	9.5	11.6	E1.4	110	220	46
JUN										
01...	1220	310	158	7.8	15.0	10.8	E1.7	130	79	61
JUL										
20...	1215	90	193	8.1	24.5	9.3	2.9	5400	>2400	70
AUG										
25...	1245	25	258	8.9	23.0	10.8	<1.1	130	49	92

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFIDE TOTAL (MG/L AS S)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
FEB									
17...	17	6.4	15	1.3	44	--	18	23	<.10
APR									
04...	11	4.5	8.8	1.3	29	--	19	12	<.10
JUN									
01...	15	5.6	9.4	1.1	40	<.5	17	12	<.10
JUL									
20...	17	6.6	9.5	1.7	50	--	18	15	.10
AUG									
25...	22	8.9	13	1.5	76	--	18	19	.10

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHATE, TOTAL (MG/L AS PO4)	CARBON, ORGANIC TOTAL (MG/L AS C)
FEB									
17...	12	134	<.010	1.40	.200	.32	1.7	.12	2.2
APR									
04...	9.6	88	.010	.700	E.060	.63	1.3	.24	3.4
JUN									
01...	13	125	<.010	.800	E.050	.50	1.3	.36	4.4
JUL									
20...	12	125	.030	1.00	<.050	.60	1.6	.31	6.0
AUG									
25...	7.8	143	.020	--	--	--	--	.15	3.6

01399780 LAMINGTON (BLACK) RIVER AT BURNT MILLS, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
JUN								
01...	1220	130	1	10	50	1	20	5

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
JUN								
01...	640	9	40	.1	6	<1	10	<1

01400000 NORTH BRANCH RARITAN RIVER NEAR RARITAN, NJ

LOCATION.--Lat 40°34'10", long 74°40'45", Somerset County, Hydrologic Unit 02030105, on right bank, 400 ft upstream from U.S. Highway 202, 1.4 mi upstream from confluence with South Branch, and 2.7 mi west of Raritan.

DRAINAGE AREA.--190 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1923 to current year. Monthly discharge only for June 1923, published in WSP 1302. Prior to October 1943, published as "at Milltown".

REVISED RECORDS.--WSP 1552: 1924-26, 1928-35. WDR NJ-79-1: 1971-78(P).

GAGE.--Water-stage recorder. Concrete control since Sept. 1, 1936. Datum of gage is 50.43 ft National Geodetic Vertical Datum of 1929. Prior to Oct. 17, 1936, nonrecording gage at site 30 ft downstream at same datum.

REMARKS.--Water-discharge records good. Some regulation by Round Valley Reservoir.

AVERAGE DISCHARGE.--60 years, 305 ft³/s unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 28,600 ft³/s Aug. 28, 1971, gage height, 15.47 ft, from high-water mark in gage house, from rating curve extended above 15,000 ft³/s; minimum observed, about 3 ft³/s Nov. 28, 1930, gage height, 1.72 ft result of freezeup, minimum daily, 7.5 ft³/s Sept. 26, 27, 1964.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 5,000 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Mar. 21	1815	5490	7.96	Apr. 16	1515	*14200	11.59
Mar. 28	0445	5920	8.20	May 27	0330	7050	8.78
Apr. 10	1915	7190	8.85				

Minimum discharge, 31 ft³/s Sept. 11, 12, gage height, 2.45 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	134	112	192	100	236	348	523	501	654	191	77	60
2	164	143	268	97	286	988	447	459	561	191	76	55
3	173	122	170	94	1280	452	2470	425	490	166	69	52
4	182	121	157	84	509	348	973	449	783	143	68	48
5	147	230	142	101	332	315	738	384	551	130	69	47
6	156	126	142	354	288	284	629	351	472	123	72	45
7	193	101	131	184	294	361	560	338	462	112	66	41
8	191	134	111	146	254	610	1150	315	385	104	57	37
9	181	104	104	127	228	809	1670	339	334	99	52	35
10	152	74	90	132	210	1140	3690	292	305	113	47	34
11	139	71	97	1550	109	746	1640	275	284	88	393	33
12	139	70	94	397	107	908	1100	262	262	86	387	36
13	134	522	68	256	239	572	909	249	243	82	152	95
14	147	209	77	229	236	441	782	241	225	77	122	53
15	161	131	87	225	264	391	709	241	212	76	124	43
16	154	110	524	236	271	348	7310	322	200	79	113	40
17	146	105	350	225	269	318	2400	449	190	70	95	39
18	149	100	179	152	387	727	1430	264	187	66	83	38
19	168	94	151	117	491	2480	1330	244	222	72	75	36
20	163	86	153	129	384	898	1360	364	525	197	64	35
21	170	84	155	143	420	2530	1160	494	278	106	55	51
22	153	82	148	132	655	1240	967	573	235	101	51	260
23	145	79	132	376	771	850	825	1530	200	91	50	81
24	144	76	150	1070	708	707	1050	552	180	99	46	58
25	162	70	147	583	569	594	1640	386	163	120	44	53
26	225	68	140	406	386	494	935	1140	149	94	43	52
27	115	68	125	286	307	651	787	2900	144	77	42	52
28	100	67	121	239	295	2800	698	863	259	70	42	49
29	144	606	124	217	---	861	615	931	518	65	89	44
30	130	231	112	200	---	694	555	1280	213	71	102	53
31	122	---	102	252	---	599	---	817	---	105	69	---
TOTAL	4783	4196	4743	8839	10785	25504	41052	18230	9886	3264	2894	1655
MEAN	154	140	153	285	385	823	1368	588	330	105	93.4	55.2
MAX	225	606	524	1550	1280	2800	7310	2900	783	197	393	260
MIN	100	67	68	84	107	284	447	241	144	65	42	33

CAL YR 1982 TOTAL 120080 MEAN 329 MAX 8800 MIN 65
WTR YR 1983 TOTAL 135831 MEAN 372 MAX 7310 MIN 33

01400120 RARITAN RIVER AT RARITAN, NJ

LOCATION.--Lat 40°33'52", long 74°38'10", Somerset County, Hydrologic Unit 02030105, at bridge on South Branch-Raritan Road in Raritan, 1.7 mi upstream from Peters Brook, 3.5 mi northeast of South Branch, and 3.6 mi southeast of North Branch.

DRAINAGE AREA.--474 mi².

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1977 to current year.

COOPERATION.--Analyses of fecal coliform and fecal streptococci by the MPN method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, FECAL, EC BROTH (MPN)	STREPTOCOCCI FECAL (MPN)
JAN 20...	1100	360	299	6.6	.0	14.9	100	1.6	<20	<20
APR 13...	1000	2400	170	7.8	9.0	11.4	96	1.0	490	20
MAY 16...	1200	--	207	7.8	15.5	9.7	97	1.0	1300	200
JUL 06...	1100	310	227	8.1	26.5	7.9	97	1.3	20	<20
AUG 09...	1100	280	219	8.8	28.0	9.6	122	1.1	1400	<200

DATE	HARDNESS (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	SULFIDE TOTAL (MG/L AS S)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)
JAN 20...	96	23	9.3	20	2.0	53	--	32	32	.10
APR 13...	53	13	5.0	8.5	1.1	32	--	22	13	<.10
MAY 16...	83	20	8.0	12	1.3	56	<.5	23	17	.10
JUL 06...	85	21	7.9	11	1.6	60	--	22	17	<.10
AUG 09...	76	19	7.0	10	1.7	57	--	23	15	.10

DATE	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHATE, TOTAL (MG/L AS PO4)	CARBON, ORGANIC TOTAL (MG/L AS C)
JAN 20...	14	168	.020	2.50	.250	.59	3.1	.28	2.5
APR 13...	11	106	.010	1.40	.130	.66	2.1	.33	2.9
MAY 16...	5.2	138	.020	.900	<.050	.56	1.5	.15	2.5
JUL 06...	10	151	.020	1.00	<.050	E.37	--	.40	3.5
AUG 09...	6.8	150	.010	.500	.110	.33	.83	.31	3.6

01400120 RARITAN RIVER AT RARITAN, NJ--Continued

WATER QUALITY DATA, WATEYEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CAMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
MAY								
16...	1200	10	2	<10	30	1	<10	4

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
MAY								
16...	200	11	30	<.1	9	<1	30	<1

01400300 PETERS BROOK NEAR RARITAN, NJ

LOCATION.--Lat 40°35'35", long 74°40'00", Somerset County, Hydrologic Unit 02030105, on left bank 12 ft upstream from bridge on Garretson Road, 1.5 mi north of Raritan, and 2.5 mi from mouth.

DRAINAGE AREA.--4.19 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORDS.--May 1978 to current year.

REVISED RECORD.--WDR NJ-79-1: 1978(P).

GAGE.--Water-stage recorder. Datum of gage is 68.713 ft National Geodetic Vertical Datum of 1929 (levels by Somerset County).

REMARKS.--Water-discharge records fair.

AVERAGE DISCHARGE.--5 years, 5.94 ft³/s, 19.25 in/yr.

COOPERATION.--Gage-height record collected in cooperation with Somerset County.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 940 ft³/s May 11, 1981, gage height, 7.46 ft; no flow part or all of some days in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 500 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Jan. 11	0100	506	5.44	Apr. 16	0840	*799	6.87
Mar. 21	1215	555	5.69	May 22	2305	566	5.75
Mar. 27	2245	682	6.32	May 26	1900	570	5.77
Apr. 10	1230	643	6.13				

Minimum discharge, 0.01 ft³/s Sept. 8, 9, 12, 20, 21, gage height, 1.60 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.34	.26	15	.61	2.0	13	3.9	2.0	2.6	.56	.47	.06
2	.28	.27	4.8	.59	10	23	3.5	1.6	1.9	.49	.46	.04
3	.22	.26	1.8	.55	29	3.0	104	1.5	1.7	.44	.34	.04
4	.27	1.5	1.7	.48	3.2	2.2	7.2	2.4	9.6	.37	.89	.03
5	.26	11	1.2	15	1.6	1.8	4.7	1.4	2.0	.36	.47	.04
6	.29	.76	2.2	19	1.3	1.7	3.9	1.2	1.7	.35	.32	.03
7	.24	.45	1.1	2.0	1.5	2.6	3.7	1.1	1.4	.30	.14	.02
8	.24	.38	.91	1.2	1.5	25	58	1.1	1.2	.26	.12	.01
9	.29	.34	.84	.97	1.3	19	17	1.2	1.1	.26	.06	.02
10	.23	.30	.74	12	1.1	36	143	1.0	1.0	.23	.03	.03
11	.21	.30	.83	64	.83	6.1	16	.94	.99	.22	15	.02
12	.21	.30	.76	3.1	1.1	9.8	8.7	.94	.96	.20	1.3	1.0
13	.39	54	.62	1.6	1.2	3.1	6.7	.85	.86	.16	.36	.49
14	.55	1.6	.58	1.2	1.0	2.4	5.8	.86	.74	.13	.36	.04
15	.32	.93	.67	4.1	1.1	2.2	5.6	1.0	.71	.15	.27	.03
16	.26	.69	20	6.1	2.2	1.8	223	7.7	.69	.16	.23	.03
17	.21	.60	2.5	2.9	9.3	1.7	15	2.7	.72	.16	.14	.03
18	.21	.56	1.0	1.7	22	59	6.7	1.1	.67	.16	.13	.03
19	.21	.50	.89	1.1	14	34	16	1.0	.81	.31	.11	.02
20	.22	.42	1.1	.96	8.9	4.0	18	2.5	1.5	.22	.07	.01
21	.21	.40	1.2	.94	12	112	6.1	10	1.5	.17	.04	4.2
22	.32	.43	1.0	.91	22	8.0	4.0	41	.95	.17	.04	2.1
23	.23	.41	.91	58	23	3.1	3.1	26	.74	.14	.03	.19
24	.19	.37	1.5	32	9.0	2.2	18	4.8	.63	.49	.03	.10
25	3.7	.31	1.1	12	4.5	1.8	42	1.7	.54	.30	.03	.09
26	12	.34	1.1	5.6	2.6	1.5	5.5	113	.54	.24	.03	.10
27	.69	.36	.85	2.5	2.0	79	3.5	35	.54	.20	.03	.07
28	.42	.58	.83	1.9	1.9	36	2.9	4.4	9.0	.17	.04	.08
29	.33	38	.84	1.5	---	6.9	2.3	16	2.4	.22	.08	.10
30	.29	1.9	.69	2.1	---	4.9	2.1	16	.72	.40	.12	.60
31	.26	---	.63	3.3	---	4.3	---	4.0	---	.63	.06	---
TOTAL	24.09	118.52	69.89	259.91	191.13	511.1	759.9	305.99	50.41	8.62	21.80	9.65
MEAN	.78	3.95	2.25	8.38	6.83	16.5	25.3	9.87	1.68	.28	.70	.32
MAX	12	54	20	64	29	112	223	113	9.6	.63	15	4.2
MIN	.19	.26	.58	.48	.83	1.5	2.1	.85	.54	.13	.03	.01
CFSM	.19	.94	.54	2.00	1.63	3.94	6.04	2.36	.40	.07	.17	.08
IN.	.21	1.05	.62	2.31	1.70	4.54	6.75	2.72	.45	.08	.19	.09

CAL YR 1982 TOTAL 2051.29 MEAN 5.62 MAX 243 MIN .05 CFSM 1.34 IN. 18.21
WTR YR 1983 TOTAL 2331.01 MEAN 6.39 MAX 223 MIN .01 CFSM 1.53 IN. 20.70

01400350 MACS BROOK AT SOMERVILLE, NJ

LOCATION.--Lat 40°34'26", long 74°37'06", Somerset County, Hydrologic Unit 02030105, on left upstream wingwall of culvert under access road from U.S. Highway 22 west to U.S. Highways 202 and 206, 1,200 ft upstream from Peters Brook, and 0.4 mi north of Somerville.

DRAINAGE AREA.--0.77 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1982 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 58.37 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records fair except those below 0.5 ft³/s, which are poor.

COOPERATION.--Gage-height record collected in cooperation with Somerset County.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 316 ft³/s Mar. 27, 1983, gage height 3.64 ft; no flow part of many days in Sept. 1982, and part or all of many days in July, August, September 1983.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 150 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Jan. 11	0030	172	3.09	Apr. 16	0725	185	3.73
Mar. 27	2220	*316	3.64	May 22	2320	237	3.34
Apr. 3	0815	166	3.02	May 26	1920	230	3.31
Apr. 10	1155	286	3.53				

No flow part or all of many days in July, August and September.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.10	.07	3.2	.12	.59	3.7	.84	.66	.74	.12	.01	.01
2	.10	.07	1.2	.11	2.0	6.0	.71	.59	.62	.12	.04	.00
3	.10	.07	.55	.10	6.2	1.3	27	.58	.56	.11	.00	.00
4	.10	.22	.47	.09	1.3	.86	1.7	.88	2.4	.11	.09	.00
5	.11	.93	.32	3.3	.61	.69	1.1	.51	.70	.11	.02	.00
6	.12	.10	.80	4.1	.50	.61	.89	.43	1.6	.07	.01	.00
7	.12	.08	.33	.72	.57	1.3	.94	.38	.78	.07	.00	.00
8	.12	.08	.22	.40	.53	6.8	16	.39	.51	.06	.00	.00
9	.12	.07	.20	.24	.45	4.6	4.4	.34	.38	.07	.00	.00
10	.13	.07	.16	2.4	.50	9.7	45	.29	.38	.06	.00	.00
11	.15	.07	.18	13	.23	2.7	3.1	.29	.32	.06	1.6	.00
12	.11	.09	.17	.91	.27	4.0	1.6	.29	.28	.06	.12	.15
13	.09	5.0	.16	.47	.31	1.3	1.2	.29	.26	.06	.04	.03
14	.08	.54	.14	.35	.29	1.0	1.1	.25	.25	.05	.03	.00
15	.07	.33	.22	2.8	.33	.86	1.1	.34	.20	.05	.03	.00
16	.07	.23	3.2	2.5	.38	.69	46	1.9	.19	.05	.03	.00
17	.07	.22	.67	1.2	3.6	.68	3.4	.60	.18	.04	.03	.00
18	.08	.22	.32	.64	6.0	13	1.7	.23	.16	.03	.03	.00
19	.09	.22	.22	.35	4.6	8.0	5.3	.27	.29	.11	.02	.00
20	.10	.20	.41	.29	3.1	1.5	5.3	.53	.40	.05	.02	.00
21	.10	.19	.45	.28	3.7	24	1.8	2.7	.43	.03	.01	.69
22	.10	.17	.30	.27	5.2	1.4	1.3	9.7	.15	.02	.01	.18
23	.11	.16	.23	14	5.4	.57	1.2	5.6	.14	.01	.01	.02
24	.11	.16	.35	7.0	2.5	.39	5.4	1.6	.14	.12	.00	.00
25	.74	.16	.24	3.5	1.5	.29	12	.51	.11	.04	.00	.00
26	1.4	.16	.27	1.2	1.0	.22	1.7	27	.11	.02	.00	.00
27	.10	.16	.18	.73	.76	25	1.1	12	.11	.01	.00	.01
28	.07	.38	.19	.55	.74	7.2	.95	1.1	1.6	.00	.00	.00
29	.07	6.0	.18	.47	---	1.7	.81	3.1	.35	.00	.02	.00
30	.07	.66	.13	.58	---	1.1	.73	3.3	.13	.01	.03	.18
31	.07	---	.12	.85	---	.94	---	1.1	---	.03	.02	---
TOTAL	4.97	17.08	15.78	63.52	53.16	132.10	195.37	77.75	14.47	1.75	2.22	1.27
MEAN	.16	.57	.51	2.05	1.90	4.26	6.51	2.51	.48	.06	.07	.04
MAX	1.4	6.0	3.2	14	6.2	25	46	27	2.4	.12	1.6	.69
MIN	.07	.07	.12	.09	.23	.22	.71	.23	.11	.00	.00	.00
CFSM	.21	.74	.66	2.66	2.47	5.53	8.45	3.26	.62	.07	.09	.05
IN.	.24	.83	.76	3.07	2.57	6.38	9.44	3.76	.70	.08	.11	.06

WTR YR 1983 TOTAL 579.44 MEAN 1.59 MAX 46 MIN .00 CFSM 2.06 IN. 27.99

01400500 RARITAN RIVER AT MANVILLE, NJ

LOCATION.--Lat 40°33'18", long 74°35'02", Somerset County, Hydrologic Unit 02030105, on left bank at downstream side of highway bridge at Manville, and 1.4 mi upstream from Millstone River.
DRAINAGE AREA.--490 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1903 to March 1907 (published as "at Finderne"), August 1908 to April 1915 (gage heights only, published in WSP 521), August 1921 to current year. Monthly discharge only for some periods, published in WSP 1302.
REVISED RECORDS.--WSP 1552: 1904, 1906, 1922, 1923(M), 1924-25, 1926-29(M), 1930, 1932-33(M), 1924-54. WDR NJ-75-1: 1964(M), 1969(M), 1970(P), 1972(P), 1973(P).
GAGE.--Water-stage recorder. Datum of gage is 20.61 ft National Geodetic Vertical Datum of 1929. Prior to Aug. 15, 1923, nonrecording gage on downstream side of highway bridge at same site and datum. From Oct. 1, 1952 to Sept. 30, 1966, water-stage recorder at station at Bound Brook, above Calco Dam (station 01403000) used as auxiliary gage when stage is above 5.0 ft. Since Oct. 1, 1966, water-stage recorder at station at Bound Brook, used as auxiliary gage, was moved downstream to present site (station 01403060). Between June 9, 1978 and June 7, 1979, gage temporarily relocated at site 1.4 mi downstream, just upstream of Millstone River, because of reconstruction of highway bridge.
REMARKS.--Records good. Records given herein represent flow at gage only. Slight diurnal fluctuation at low flow. Flow regulated by Spruce Run and Round Valley Reservoirs (see Raritan River Basin, reservoirs in). Diversion to Round Valley Reservoir (see Raritan River Basin, diversions). Water diverted 1,500 ft upstream from station by Johns-Manville Corporation and returned to river 600 ft downstream from Millstone River (see Raritan River Basin, diversions).
AVERAGE DISCHARGE.--65 years, (water years 1904-06, 1922-83), 761 ft^3/s, unadjusted.
EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 36,300 ft^3/s Aug. 28, 1971, gage height, 23.8 ft, from floodmark (backwater from Millstone River), from rating curve extended above 14,000 ft^3/s on basis of slope-area measurements at gage heights, 14.9 and 20.42 ft; minimum daily discharge, 17 ft^3/s Sept. 19, 1964 (does not include water diverted to Johns-Manville Plant).
EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 10,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)
Apr. 11	0030	14400	14.82
Apr. 16	2015	*22800	18.39

Minimum discharge, 141 ft^3/s Dec. 13, gage height, 3.88 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	223	169	488	230	744	997	1260	1300	1640	369	307	216
2	277	217	791	222	738	2980	1070	1190	1330	351	281	224
3	264	185	503	214	2960	1650	5210	1120	1110	327	313	261
4	292	188	431	214	1790	1150	3300	1140	1600	324	280	275
5	240	429	368	287	1220	966	1840	1030	1450	323	291	285
6	236	415	350	824	912	846	1510	902	1210	313	325	285
7	278	215	330	520	870	958	1330	819	1240	298	330	280
8	285	224	278	386	832	1330	1860	769	916	283	294	290
9	286	220	246	323	755	1890	4210	864	752	276	274	316
10	251	203	213	328	637	2620	6480	729	656	303	292	341
11	230	193	231	3600	470	2230	8250	652	619	302	400	336
12	221	199	244	1390	580	2360	3130	611	579	287	1160	341
13	224	1020	221	821	1400	1750	2150	570	561	285	643	487
14	214	795	305	593	1110	1320	1800	568	495	292	293	271
15	260	363	307	626	781	1160	1590	569	459	307	231	276
16	241	290	852	658	645	1020	11900	764	434	301	256	296
17	221	268	1250	511	647	878	12500	1310	412	309	287	293
18	221	239	552	420	886	1360	4260	781	410	318	278	292
19	248	217	420	521	1220	6590	3190	629	400	448	274	314
20	234	228	399	590	1030	2900	3310	771	966	630	273	318
21	251	238	389	564	1040	4890	2860	1010	783	427	272	349
22	231	220	356	505	1470	5540	2440	1500	572	377	271	837
23	217	206	313	803	1940	2290	1990	3330	438	349	311	347
24	215	202	329	2260	1920	1680	2530	1610	379	352	297	221
25	270	199	345	1760	1660	1410	5290	1100	338	333	306	287
26	449	190	326	1360	1350	1190	3070	1470	313	254	310	264
27	352	196	292	997	1030	1190	2080	6920	302	247	324	234
28	205	215	276	817	976	6670	1790	4220	420	236	325	242
29	247	1170	282	708	---	2500	1580	2310	1100	274	860	261
30	207	792	263	651	---	1700	1440	3080	503	303	417	336
31	202	---	240	760	---	1420	---	2240	---	463	328	---
TOTAL	7792	9905	12190	24463	31613	67435	105220	45878	22387	10261	11103	9375
MEAN	251	330	393	789	1129	2175	3507	1480	746	331	358	313
MAX	449	1170	1250	3600	2960	6670	12500	6920	1640	630	1160	837
MIN	202	169	213	214	470	846	1070	568	302	236	231	216

CAL YR 1982 TOTAL 261149 MEAN 715 MAX 9790 MIN 169
WTR YR 1983 TOTAL 357622 MEAN 980 MAX 12500 MIN 169

01400500 RARITAN RIVER AT MANVILLE, NJ--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1923-25, 1959, 1962-73, 1976 to current year.

COOPERATION.--Analyses of fecal coliform and fecal streptococci by the MPN method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
JAN										
27...	1100	992	228	7.2	1.5	14.0	98	1.3	540	130
APR										
06...	1230	1420	181	7.6	9.5	11.0	95	1.5	170	<20
JUN										
09...	1100	760	194	7.9	19.5	8.8	94	1.1	500	<200
JUL										
20...	1130	620	210	7.8	25.5	6.8	82	1.9	4900	800
AUG										
17...	1100	280	227	8.2	24.0	9.6	113	1.0	<200	<200

DATE	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
JAN									
27...	68	17	6.2	13	1.7	35	25	24	<.10
APR									
06...	61	15	5.8	9.6	1.4	35	22	13	<.10
JUN									
09...	76	18	7.6	12	1.4	50	22	15	<.10
JUL									
20...	77	19	7.1	10	1.8	52	22	14	.10
AUG									
17...	80	20	7.2	12	1.8	53	26	17	<.10

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHATE, TOTAL (MG/L AS PO4)	CARBON, ORGANIC TOTAL (MG/L AS C)
JAN									
27...	11	143	.010	2.60	.040	.68	3.3	.25	3.7
APR									
06...	11	116	.020	1.60	.130	.21	1.8	.27	2.9
JUN									
09...	12	121	.020	1.30	E.040	.32	1.6	.45	3.5
JUL									
20...	7.1	123	.030	.900	<.050	.55	1.5	.43	5.3
AUG									
17...	9.9	143	.030	.900	.090	.53	1.4	.40	4.8

01400540 MILLSTONE RIVER NEAR MANALAPAN, NJ

LOCATION.--Lat 40°15'44", long 74°25'13", Middlesex County, Hydrologic Unit 02030105, at bridge on State Route 33, 1.3 mi west of Manalapan, 5.5 mi east of Hightstown, and 8.4 mi above Rocky Brook.

DRAINAGE AREA.--7.37 mi².

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1960 to 1964, June 1981 to current year.

COOPERATION.--Analyses of fecal coliform and fecal streptococci by the MPN method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)	HARD-NESS (MG/L AS CACO3)
JAN 11...	1030	100	6.0	9.0	10.2	88	.8	540	>2400	25
MAR 15...	1030	115	6.6	8.0	11.0	93	1.5	<2	2	30
MAY 23...	1100	97	6.5	16.0	7.0	71	1.7	490	2800	27
JUL 18...	1130	100	7.2	23.0	7.9	92	1.3	500	330	31
AUG 01...	1300	99	7.3	25.0	8.6	--	2.9	230	540	31
SEP 22...	1000	103	6.5	17.5	8.4	--	2.3	3500	>2400	29

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFIDE TOTAL (MG/L AS S)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
JAN 11...	5.2	2.9	5.4	2.2	3.0	--	16	9.1	.10
MAR 15...	6.3	3.5	6.3	2.1	4.0	--	20	13	.10
MAY 23...	5.7	3.0	4.3	1.8	8.0	.5	14	7.7	.20
JUL 18...	6.1	3.8	5.7	1.9	17	--	9.1	11	.20
AUG 01...	6.4	3.6	4.4	2.1	18	--	10	11	.20
SEP 22...	6.3	3.3	6.1	4.2	10	<.5	15	14	.20

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHATE, TOTAL (MG/L AS PO4)	CARBON, ORGANIC TOTAL (MG/L AS C)
JAN 11...	9.1	72	.030	1.10	.070	.62	1.7	1.00	5.7
MAR 15...	7.5	70	<.010	1.60	<.050	.32	1.9	.12	3.4
MAY 23...	7.3	--	.010	E1.00	.150	E2.7	--	.36	1.4
JUL 18...	8.0	66	<.010	1.00	.050	.47	1.5	.40	3.4
AUG 01...	7.8	78	.010	.800	.080	.20	1.0	.31	1.7
SEP 22...	9.0	75	<.010	.600	<.050	.86	1.5	.86	4.8

01400540 MILLSTONE RIVER NEAR MANALAPAN, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CAMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
MAY								
23...	1100	70	1	<10	20	1	<10	<1
SEP								
22...	1000	50	3	<10	30	<1	--	4

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
MAY								
23...	2400	5	50	<.1	16	<1	40	--
SEP								
22...	4800	21	110	<.1	5	<1	50	2

01400650 MILLSTONE RIVER AT GROVERS MILL, NJ

LOCATION.--Lat 40°19'19", long 74°36'31", Mercer County, Hydrologic Unit 02030105, at bridge on Millstone Road in Grovers Mill, 0.3 mi upstream from Cranbury Brook, and 2.7 mi north of Dutch Neck.

DRAINAGE AREA.--43.4 mi².

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976 to current year.

COOPERATION.--Analyses of fecal coliform and fecal streptococci by the MPN method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
JAN 11...	1230	183	6.7	8.0	9.2	78	7.8	1600	>2400
MAR 15...	1215	163	6.6	9.0	9.1	79	2.4	5	5
MAY 23...	1300	149	6.7	18.5	6.7	71	5.1	2800	460
JUL 18...	1300	208	6.7	29.0	6.7	87	3.9	130	130
AUG 11...	1100	195	6.5	24.0	4.0	47	2.4	310	90

DATE	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
JAN 11...	43	10	4.3	14	2.9	9.0	22	20	.20
MAR 15...	40	9.5	4.0	10	3.1	7.0	26	17	.20
MAY 23...	38	9.1	3.8	8.2	3.1	10	17	13	.20
JUL 18...	53	12	5.5	16	4.0	23	20	24	.40
AUG 11...	51	12	5.0	15	3.4	20	19	20	.30

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHATE, TOTAL (MG/L AS PO4)	CARBON, ORGANIC TOTAL (MG/L AS C)
JAN 11...	7.7	107	.070	1.80	.950	2.4	4.2	2.70	5.1
MAR 15...	7.1	95	.030	1.60	.600	1.1	2.7	.61	4.8
MAY 23...	5.7	88	.080	E1.90	.820	E1.7	--	.76	5.7
JUL 18...	2.6	139	.040	4.80	<.050	.66	5.5	.71	3.7
AUG 11...	7.5	114	.020	4.10	.080	.76	4.9	.80	4.2

01401000 STONY BROOK AT PRINCETON, NJ

LOCATION.--Lat 40°19'59", long 74°40'56", Mercer County, Hydrologic Unit 02030105, at bridge on U.S. Highway 206, 1.6 mi southwest of Princeton, and 4.0 mi upstream from Carnegie Lake.

DRAINAGE AREA.--44.5 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1953 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 62.23 ft National Geodetic Vertical Datum of 1929 (levels from New Jersey Geological Survey bench mark).

REMARKS.--Water-discharge records fair. Since July 1959 some regulation by several small reservoirs, combined capacity, 49,800,000 gal.

AVERAGE DISCHARGE.--30 years, 63.7 ft³/s, 19.44 in/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,960 ft³/s Aug. 28, 1971, gage height, 14.26 ft, from rating curve extended above 4,000 ft³/s on basis of contracted-opening measurement of peak flow; no flow many days in August and September 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,800 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Mar. 21	1630	2740	8.25	Apr. 10	1630	2530	7.93
Mar. 28	0330	2070	7.03	Apr. 16	1315	*4220	10.21
Apr. 3	1145	2350	7.59	May 27	0415	1930	6.77

No flow part of Aug. 8, 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.3	5.2	45	15	49	93	77	58	86	33	3.1	.93
2	3.6	5.2	103	14	47	503	61	50	61	22	2.6	.87
3	3.3	5.4	43	13	264	163	836	45	46	18	2.3	.84
4	2.8	5.3	34	12	117	106	211	51	120	15	2.0	.78
5	2.4	14	27	16	64	78	136	44	156	13	1.8	.72
6	2.3	21	28	138	51	63	105	34	64	11	3.9	.72
7	2.2	11	25	60	63	95	86	30	71	9.6	2.8	.67
8	2.2	7.5	20	40	47	191	126	28	41	8.7	2.3	.66
9	2.8	6.3	17	32	39	255	324	26	30	8.5	1.9	.61
10	2.1	5.7	15	35	31	326	1000	23	25	8.1	1.7	.69
11	2.7	5.0	15	532	15	201	299	22	21	7.2	28	.66
12	2.9	5.9	16	122	32	360	176	19	18	4.8	81	1.7
13	3.2	104	15	69	44	179	127	17	16	3.8	19	2.3
14	3.2	46	15	48	42	117	100	16	14	2.3	5.1	1.5
15	2.9	24	15	124	43	92	86	15	13	2.2	2.3	1.2
16	3.0	16	149	129	42	69	1890	61	12	6.8	2.2	1.2
17	3.4	12	114	77	50	57	320	138	12	8.5	1.5	1.1
18	4.1	11	50	52	98	247	193	43	11	6.5	1.1	1.1
19	4.6	10	36	35	142	683	214	30	11	7.4	1.0	1.1
20	3.8	9.2	36	35	121	190	269	31	15	9.8	.96	1.1
21	4.9	8.4	36	37	135	991	204	58	37	11	.74	1.5
22	2.8	8.3	29	36	216	281	136	133	21	19	.76	16
23	3.2	7.9	24	164	248	154	109	228	15	8.8	.75	7.1
24	3.3	7.4	24	206	210	114	339	92	12	14	.72	6.1
25	9.1	6.6	23	120	152	91	812	54	9.8	15	.69	5.5
26	60	5.7	23	80	115	68	212	66	8.6	7.1	.68	5.1
27	26	5.5	20	59	74	114	143	712	7.9	3.1	.67	5.1
28	12	5.6	19	49	67	698	113	194	27	2.3	.68	4.9
29	8.3	120	21	43	---	183	88	130	94	1.7	6.1	4.9
30	7.0	56	19	40	---	118	72	227	51	16	1.4	6.2
31	5.6	---	16	56	---	94	---	132	---	19	1.0	---
TOTAL	204.0	561.1	1072	2488	2618	6974	8864	2807	1126.3	323.2	180.75	82.85
MEAN	6.58	18.7	34.6	80.3	93.5	225	295	90.5	37.5	10.4	5.83	2.76
MAX	60	120	149	532	264	991	1890	712	156	33	81	16
MIN	2.1	5.0	15	12	15	57	61	15	7.9	1.7	.67	.61
CFSM	.15	.42	.78	1.80	2.10	5.06	6.63	2.03	.84	.23	.13	.06
IN.	.17	.47	.90	2.08	2.19	5.83	7.41	2.35	.94	.27	.15	.07

CAL YR 1982 TOTAL 19987.52 MEAN 54.8 MAX 1800 MIN .93 CFSM 1.23 IN. 16.71
WTR YR 1983 TOTAL 27301.20 MEAN 74.8 MAX 1890 MIN .61 CFSM 1.68 IN. 22.82

01401000 STONY BROOK AT PRINCETON, NJ--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1956-75, 1978 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: October 1956 to September 1962, October 1963 to September 1964, October 1965 to June 1970.
SUSPENDED-SEDIMENT DISCHARGE: January 1956 to June 1970.

COOPERATION.--Analyses of fecal coliform and fecal streptococci by the MPN method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, FECAL, EC BROTH (MPN)	STREPTOCOCCI FECAL (MPN)
JAN 25...	1415	101	159	6.9	2.5	14.6	107	1.8	1600	>2400
MAR 30...	1315	117	138	7.4	8.0	12.2	102	1.5	>2400	350
MAY 19...	1100	29	148	8.3	14.5	11.7	112	2.4	79	33
JUL 12...	1130	4.1	267	7.9	23.0	6.4	74	1.8	170	17
AUG 17...	1500	1.6	252	8.9	25.0	11.5	138	2.1	49	33

DATE	HARDNESS (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	SULFIDE TOTAL (MG/L AS S)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)
JAN 25...	45	10	4.8	10	2.3	21	--	22	14	<.10
MAR 30...	41	9.4	4.2	7.3	1.6	22	--	24	10	.10
MAY 19...	52	12	5.3	8.9	1.5	36	<.5	23	11	.10
JUL 12...	85	20	8.5	18	2.5	65	--	27	27	.20
AUG 17...	73	17	7.4	20	2.3	55	--	23	28	.20

DATE	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHATE, TOTAL (MG/L AS PO4)	CARBON, ORGANIC TOTAL (MG/L AS C)
JAN 25...	11	110	.010	1.20	.370	.57	1.8	.37	4.7
MAR 30...	12	110	.020	1.30	.120	.58	1.9	.21	3.6
MAY 19...	5.8	114	<.010	.300	.120	.37	.67	.21	4.6
JUL 12...	3.5	172	.010	.100	.140	.48	.58	.28	4.7
AUG 17...	4.5	161	.010	.100	.060	.53	.63	.25	4.8

01401000 STONY BROOK AT PRINCETON, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYL-LIUM, TOTAL RECOV-ERABLE (UG/L AS BE)	BORON, TOTAL RECOV-ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)
MAY								
19...	1100	<10	1	<10	30	1	<10	1

DATE	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	SELE-NIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
MAY								
19...	170	3	20	<.1	5	<1	10	<1

01401440 MILLSTONE RIVER AT KINGSTON, NJ

LOCATION.--Lat 40°22'24", long 74°37'15", Middlesex County, Hydrologic Unit 02030105, at bridge on Lincoln Highway in Kingston, 0.2 mi downstream from the outflow of Carnegie Lake, and 3.0 mi northwest of Plainsboro.

DRAINAGE AREA.--172 mi², includes 8.0 mi² which drains into Delaware and Raritan Canal.

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976 to current year.

COOPERATION.--Analyses of fecal coliform and fecal streptococci by the MPN method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FEC (MPN)
JAN 24...	1330	214	8.1	2.0	13.3	96	1.8	140	350
APR 13...	1330	100	6.8	11.0	11.5	102	1.8	540	170
MAY 19...	1415	151	7.3	16.0	9.4	93	3.3	79	49
JUL 13...	1400	189	7.8	29.0	8.2	106	3.3	20	>20
SEP 06...	1430	166	8.7	28.5	8.5	110	3.8	<200	500

DAT	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
JAN 24...	57	13	5.9	16	2.8	22	27	25	.20
APR 13...	29	6.7	2.9	5.5	2.0	11	18	8.3	.10
MAY 19...	44	10	4.6	9.2	2.4	20	21	16	.20
JUL 13...	56	13	5.6	12	3.0	31	21	19	.20
SEP 06...	46	11	4.6	10	3.6	23	22	17	.20

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHATE, TOTAL (MG/L AS PO4)	CARBON, ORGANIC TOTAL (MG/L AS C)
JAN 24...	11	139	.010	2.00	.410	.86	2.9	.49	4.9
APR 13...	6.6	60	.040	1.00	.340	.90	1.9	.55	7.2
MAY 19...	4.4	118	.030	1.30	.200	.79	2.1	.45	4.9
JUL 13...	6.1	109	.040	1.10	.090	.81	1.9	.43	--
SEP 06...	3.4	94	.020	E.300	.100	.99	--	.28	4.6

01401600 BEDEN BROOK NEAR ROCKY HILL, NJ

LOCATION.--Lat 40°24'52", long 74°39'02", Somerset County, Hydrologic Unit 02030105, at bridge on U.S. Route 206 at State Route 533, 0.7 mi upstream from Pike Run, 1.2 mi northwest of Rocky Hill, and 4.6 mi north of Princeton.

DRAINAGE AREA.--27.6 mi^2.

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1959-63, 1976 to current year.

COOPERATION.--Analyses of fecal coliform and fecal streptococci by the MPN method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	COLI- FORM, FECAL, EC BROTH (MPN)	STREP- TOCOCCI FECAL (MPN)	HARD- NESS (MG/L AS CACO3)
JAN										
24...	1030	132	6.5	1.0	14.0	99	1.6	920	>2400	38
APR										
07...	1000	151	7.5	10.0	11.1	97	1.1	240	130	48
MAY										
18...	1100	130	7.9	13.0	13.2	122	1.7	4900	80	47
JUL										
07...	1030	231	8.5	22.0	12.2	137	1.1	<20	<200	85
AUG										
10...	1300	288	8.7	26.5	13.6	168	1.5	20	330	93

DATE	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (MG/L AS CACO3)	SULFIDE TOTAL (MG/L AS S)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
JAN									
24...	8.7	4.0	8.7	1.6	15	--	19	13	<.10
APR									
07...	11	5.0	7.9	1.4	24	--	24	9.8	<.10
MAY									
18...	11	4.7	7.7	1.3	28	<.5	22	8.8	<.10
JUL									
07...	20	8.4	13	2.6	59	--	28	17	.20
AUG									
10...	21	9.9	19	3.7	66	--	33	24	<.10

DATE	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHATE, TOTAL (MG/L AS PO4)	CARBON, ORGANIC TOTAL (MG/L AS C)
JAN									
24...	10	96	<.010	1.50	<.050	.59	2.1	.31	5.8
APR									
07...	14	95	.010	1.60	.050	2.5	4.1	.24	2.8
MAY									
18...	10	89	.010	.700	.100	.58	1.3	.15	5.5
JUL									
07...	5.6	162	.030	1.00	.200	E.63	--	.46	4.0
AUG									
10...	8.8	163	.030	.800	.070	.69	1.5	.92	3.5

01401600 BEDEN BROOK NEAR ROCKY HILL, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CAMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
MAY								
18...	1100	50	1	<10	50	1	<10	3

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
MAY								
18...	330	10	10	<.1	5	<1	20	<1

01401650 PIKE RUN AT BELLE MEAD, NJ

LOCATION.--Lat 40°28'05", long 74°38'57", Somerset County, Hydrologic Unit 02030105, on right bank 20 ft upstream of Township Line Road, 0.7 mi east of Belle Mead, 0.8 mi upstream of Cruser Brook, and 1.0 mi downstream of bridge on U.S. Route 206.

DRAINAGE AREA.--5.36 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1980 to current year.

GAGE.--Water-stage recorder, crest-stage gage, and concrete parking-block control. Datum of gage is 58.85 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records fair.

COOPERATION.--Gage-height record collected in cooperation with Somerset County.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 818 ft³/s Jan. 4, 1982, gage height, 8.59 ft; no flow many days in August and September 1980.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1810, 13.5 ft, from floodmark, present datum, Aug. 28, 1971.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 300 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Mar. 21	1350	629	7.37	Apr. 16	0955	*812	8.56
Mar. 28	0040	488	6.52	May 27	0130	353	5.73
Apr. 3	0940	529	6.76	June 6	2030	391	5.95
Apr. 10	1315	605	7.22				

No flow part of Aug. 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.39	.39	13	.94	7.6	17	7.2	4.9	7.6	.27	.61	.15
2	.29	.31	12	.82	13	50	6.1	4.5	5.5	.26	.25	.12
3	.28	.29	5.8	.76	34	11	156	4.1	4.0	.25	.21	.11
4	.29	.32	4.8	.68	11	7.7	36	6.1	14	.23	.19	.10
5	.29	4.5	3.8	14	6.1	6.2	21	3.9	6.7	.30	.16	.09
6	.34	1.8	3.6	17	4.8	5.3	10	3.2	58	.28	.22	.09
7	.32	.90	2.7	6.0	5.1	10	11	2.8	16	.22	.24	.10
8	.29	.72	1.7	4.3	4.8	38	54	2.6	6.1	.22	.20	.10
9	.29	.70	1.5	3.2	5.7	33	51	2.5	3.5	.22	.17	.10
10	.29	.56	1.0	12	5.3	65	211	2.2	2.7	.17	.16	.11
11	.26	.46	1.2	49	5.2	21	35	1.8	2.2	.16	6.6	.10
12	.27	.54	1.2	8.4	12	27	21	1.8	1.5	.16	3.9	.44
13	.28	16	.82	5.6	6.9	9.0	14	1.8	1.1	.16	.24	2.1
14	.51	4.6	.51	3.8	4.5	7.0	11	1.9	.90	.15	.19	.20
15	.41	3.1	.65	5.5	4.8	6.1	11	1.9	.84	.14	.17	.16
16	.28	2.1	15	7.2	6.2	4.8	304	10	.57	.16	.14	.15
17	.28	1.5	7.3	4.2	7.3	4.2	39	8.4	.29	.14	.14	.14
18	.28	1.4	4.0	3.3	13	65	17	2.8	.38	.12	.12	.14
19	.28	1.2	3.3	2.7	14	98	25	1.9	.47	34	.11	.13
20	.30	1.1	3.7	2.3	12	17	45	3.6	1.4	6.9	.10	.10
21	.30	.94	4.1	2.1	17	175	24	5.4	8.4	.46	.06	1.6
22	.30	.94	2.7	2.2	29	30	15	11	2.3	.24	.06	6.2
23	.29	.89	2.2	27	29	17	8.4	33	1.0	.21	.06	.28
24	.27	.77	2.8	56	22	15	37	6.0	.30	3.0	.05	.22
25	2.7	.70	2.1	23	13	9.8	77	3.4	.53	2.5	.04	.19
26	13	.70	1.8	13	8.9	10	15	34	.25	.26	.02	.18
27	3.0	.70	1.6	8.8	6.4	48	10	79	.25	.21	.02	.16
28	1.3	.64	1.4	6.8	6.3	95	8.2	13	1.0	.19	.00	.15
29	.83	22	1.7	5.7	---	15	6.7	12	3.9	.16	7.1	.15
30	.68	5.9	1.2	5.9	---	9.9	5.7	19	.36	18	.22	1.5
31	.46	---	1.0	11	---	8.4	---	11	---	14	.16	---
TOTAL	29.35	76.67	110.18	313.20	314.9	935.4	1292.3	299.5	152.04	83.74	21.91	15.36
MEAN	.95	2.56	3.55	10.1	11.2	30.2	43.1	9.66	5.07	2.70	.71	.51
MAX	13	22	15	56	34	175	304	79	58	34	7.1	6.2
MIN	.26	.29	.51	.68	4.5	4.2	5.7	1.8	.25	.12	.00	.09
CFSM	.18	.48	.66	1.88	2.09	5.63	8.04	1.80	.95	.50	.13	.10
IN.	.20	.53	.76	2.17	2.19	6.49	8.97	2.08	1.06	.58	.15	.11

CAL YR 1982 TOTAL 3107.29 MEAN 8.51 MAX 358 MIN .22 CFSM 1.59 IN. 21.57
WTR YR 1983 TOTAL 3644.55 MEAN 9.99 MAX 304 MIN .00 CFSM 1.86 IN. 25.29

01402000 MILLSTONE RIVER AT BLACKWELLS MILLS, NJ

LOCATION.--Lat 40°28'30", long 74°34'34", Somerset County, Hydrologic Unit 02030105, on left bank 30 ft downstream from highway bridge at Blackwells Mills, and 0.3 mi downstream from Six Mile Run.

DRAINAGE AREA.--258 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1903 to December 1904 (gage heights only), August 1921 to current year. Monthly discharge only for some periods, published in WSP 1302. Published as "at Millstone" 1903-04.

REVISED RECORDS.--WSP 1552: 1924-25(M), 1926.

GAGE.--Water-stage recorder. Concrete control since Nov. 18, 1933. Datum of gage is 26.97 ft National Geodetic Vertical Datum of 1929. June 27, 1903 to Dec. 31, 1904, nonrecording gage at bridge 2.0 mi downstream at Millstone at different datum. Aug. 4, 1921 to Aug. 16, 1928, nonrecording gage at present site and datum.

REMARKS.--Water-discharge records good except those above 1,200 ft³/s, which are poor. Inflow from and losses to Delaware and Raritan Canal above station. Flow slightly regulated by Carnegie Lake, capacity, 310,000,000 gal and several smaller reservoirs, combined capacity, 49,800,000 gal.

AVERAGE DISCHARGE.--62 years, 374 ft³/s, 19.68 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,200 ft³/s Aug. 28, 1971, gage height, 18.68 ft, from high-water mark; minimum, about 5 ft³/s Sept. 16, 1923.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,000 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Mar. 22	0600	3790	9.31	Apr. 17	0130	*7730	12.46
Apr. 11	0545	4190	9.76				

Minimum discharge, 27 ft³/s Oct. 18 and Aug. 28, gage height, 1.35 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983 MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	64	63	293	148	293	384	469	394	750	113	136	177
2	56	58	498	140	279	1690	400	354	494	99	98	134
3	51	62	339	135	805	1250	1680	324	341	98	75	95
4	48	60	262	122	640	657	2430	341	484	90	64	73
5	44	93	207	119	370	476	1210	323	596	82	59	62
6	41	88	190	513	283	374	638	280	425	75	54	55
7	39	80	176	419	268	436	510	255	394	65	49	49
8	43	73	154	303	273	856	594	229	276	61	56	41
9	45	67	141	249	246	1510	1570	209	220	60	59	37
10	43	60	126	230	213	1650	2210	194	183	55	46	36
11	38	59	122	1500	167	1700	3750	180	166	54	104	34
12	36	59	122	928	169	1610	2320	172	149	54	262	37
13	34	346	116	530	204	1360	1070	166	134	49	206	76
14	40	388	109	370	196	915	622	159	113	44	223	61
15	42	236	108	543	188	580	530	153	98	41	170	55
16	38	183	368	762	208	450	3130	295	87	44	102	49
17	34	147	663	573	262	370	5590	671	93	45	58	46
18	30	123	396	432	403	630	2410	489	90	43	52	41
19	31	106	319	275	603	2400	1330	341	87	50	55	37
20	31	92	282	219	586	2130	1410	273	98	112	53	35
21	35	86	267	191	606	2060	1340	317	277	51	48	49
22	37	82	235	173	907	3490	857	571	278	58	46	247
23	36	79	212	478	1180	2200	651	1030	234	64	45	163
24	35	76	202	1170	1170	894	1190	674	186	86	38	147
25	42	70	194	778	856	567	2410	481	127	130	36	132
26	209	69	187	548	604	460	2430	408	94	109	36	107
27	180	69	170	399	438	476	1210	2040	77	90	33	71
28	122	66	168	325	375	2270	656	1440	78	78	29	56
29	101	377	170	280	---	1900	537	738	205	63	138	48
30	85	401	165	254	---	880	459	946	151	76	117	70
31	71	---	154	308	---	602	---	853	---	282	195	---
TOTAL	1781	3818	7115	13414	12792	37227	45613	15300	6985	2421	2742	2320
MEAN	57.5	127	230	433	457	1201	1520	494	233	78.1	88.5	77.3
MAX	209	401	663	1500	1180	3490	5590	2040	750	282	262	247
MIN	30	58	108	119	167	370	400	153	77	41	29	34
CFSM	.22	.49	.89	1.68	1.77	4.66	5.89	1.91	.90	.30	.34	.30
IN.	.26	.55	1.03	1.93	1.84	5.37	6.58	2.21	1.01	.35	.40	.33

CAL YR 1982 TOTAL 103739 MEAN 284 MAX 5310 MIN 30 CFSM 1.10 IN. 14.96
WTR YR 1983 TOTAL 151528 MEAN 415 MAX 5590 MIN 29 CFSM 1.61 IN. 21.85

01402540 MILLSTONE RIVER AT WESTON, NJ

LOCATION.--Lat 40°31'47", long 74°35'19", Somerset County, Hydrologic Unit 02030105, at bridge on Wilhouski Street in Weston, 50 ft upstream from Royce Brook, 0.8 mi southwest of Alma White College, and 1.9 mi north of Millstone.

DRAINAGE AREA.--271 mi², includes approximately 13 mi² which drains into Delaware and Raritan canal.

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976 to current year.

COOPERATION.--Analyses of fecal coliform and fecal streptococci by the MPN method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
JAN 25...	1030	775	185	6.7	1.5	13.1	92	1.8	540	>2400
APR 06...	1100	705	147	7.0	10.0	10.1	89	2.0	79	120
MAY 17...	1100	705	175	7.4	14.0	8.5	81	--	7900	1100
JUL 13...	1030	49	269	7.6	24.5	8.4	100	2.2	>200	>200
AUG 11...	1100	E47	273	7.7	26.5	7.9	97	2.3	20	170

DATE	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
JAN 25...	51	12	5.0	13	2.3	19	24	17	.10
APR 06...	42	10	4.1	7.9	2.1	15	24	10	.10
MAY 17...	57	14	5.4	12	2.2	29	26	16	.10
JUL 13...	84	22	7.1	18	4.0	47	32	23	.30
AUG 11...	78	20	6.8	19	3.9	49	28	24	.30

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHATE, TOTAL (MG/L AS PO4)	CARBON, ORGANIC TOTAL (MG/L AS C)
JAN 25...	11	122	.020	2.50	.340	.76	3.3	.52	4.1
APR 06...	9.3	81	.030	1.70	.200	.61	2.3	.58	4.8
MAY 17...	6.4	112	.030	1.40	.120	1.1	2.5	.63	5.8
JUL 13...	7.7	165	.030	2.80	.050	1.0	3.8	1.17	5.4
AUG 11...	4.6	150	.030	2.20	.110	1.0	3.2	.28	4.9

01402600 ROYCE BROOK TRIBUTARY NEAR BELLE MEAD, NJ

LOCATION.--Lat 40°29'56", long 74°39'05", Somerset County, Hydrologic Unit 02030105, on right bank 25 ft upstream from bridge on State Highway 514 (Amwell Road), 1,200 ft upstream from mouth, and 2.0 mi north of Belle Mead.

DRAINAGE AREA.--1.20 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1966 to September 1974, January 1980 to current year.

REVISED RECORDS.--WRD NJ 69: 1967, 1968.

GAGE.--Water-stage recorder, crest-stage gage and concrete control. Datum of gage is 66.98 ft National Geodetic Vertical Datum of 1929. Prior to September 1974 at same site at datum 0.79 ft higher.

REMARKS.--Water-discharge records fair. Some regulation from storm-water detention basin 542 ft upstream of gage since 1980.

AVERAGE DISCHARGE.--11 years (water years 1967-74, 1981-83), 2.33 ft³/s, 26.38 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,450 ft³/s Aug. 28, 1971, gage height, 7.80 ft, present datum, from high-water mark, from rating curve extended above 203 ft³/s on basis of slope-area measurement of peak flow; no flow part of or all of some days in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 125 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Mar. 21	1110	167	3.90	Apr. 16	0800	204	4.26
Apr. 3	0810	133	3.62	June 6	1640	*326	5.45
Apr. 10	1135	174	3.97	July 30	2115	127	3.57

Minimum discharge, 0.01 ft³/s Sept. 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.41	.24	5.9	.36	1.4	4.6	1.0	1.1	1.4	.51	.58	.39
2	.35	.21	2.8	.34	2.9	8.6	.82	1.1	.92	.44	.38	.31
3	.28	.20	1.6	.32	8.4	2.0	32	.95	.92	.37	.26	.29
4	.25	.41	1.3	.25	2.3	1.3	3.4	1.9	4.8	.36	.23	.25
5	.20	1.9	.97	4.4	1.4	.99	1.8	.97	1.3	.33	.20	.24
6	.22	.42	1.0	4.9	1.0	.82	1.4	.70	32	.29	.18	.19
7	.20	.31	.72	1.6	1.1	2.0	1.4	.63	5.1	.21	.20	.14
8	.19	.28	.59	1.1	1.1	9.3	14	.67	2.3	.22	.16	.07
9	.17	.23	.55	.86	.87	7.6	8.4	.55	1.5	.26	.13	.07
10	.13	.20	.45	4.4	.68	16	46	.52	1.2	.22	.12	.09
11	.13	.20	.49	14	1.7	3.6	5.6	.46	.99	.21	11	.06
12	.14	.24	.45	2.2	.67	3.6	2.5	.56	.79	.25	1.5	2.7
13	.25	2.5	.35	1.4	.58	1.7	1.6	.39	.69	.29	.45	.63
14	.29	1.2	.33	1.0	.59	1.3	1.3	.61	.61	.27	.32	.12
15	.16	.75	.34	1.5	.70	1.0	1.1	.61	.53	.43	.28	.07
16	.14	.55	5.5	1.6	1.2	.82	66	5.3	.46	.42	.28	.05
17	.11	.47	1.7	1.4	2.2	.68	5.6	2.9	.42	.19	.24	.05
18	.05	.40	1.0	1.0	4.4	17	2.4	1.1	.41	.38	.20	.05
19	.07	.35	.83	.72	4.3	18	4.1	.97	.40	8.0	.17	.04
20	.11	.31	1.1	.58	3.6	2.9	5.2	1.4	1.5	.86	.17	.03
21	.18	.31	.94	.54	5.1	38	2.4	3.3	3.0	.36	.08	6.8
22	.11	.31	.70	.49	6.7	4.5	1.6	11	.87	.30	.12	3.2
23	.11	.29	.59	11	5.3	1.9	1.3	5.9	.58	.16	.11	.38
24	.09	.34	.67	18	3.7	1.5	7.8	1.6	.46	4.5	.12	.25
25	1.8	.16	.59	5.8	2.3	1.6	20	.85	.39	.83	.12	.18
26	7.2	.23	.56	3.3	1.5	1.7	2.9	17	.34	.36	.17	.16
27	.83	.23	.47	1.9	1.1	6.0	1.7	14	.34	.28	.21	.15
28	.49	.48	.49	1.5	1.0	13	1.5	3.4	4.1	.22	2.0	.12
29	.40	10	.47	1.3	---	4.0	1.5	3.9	1.8	.17	15	.08
30	.32	1.6	.39	1.4	---	1.6	1.3	4.4	.63	12	.69	1.6
31	.27	---	.37	1.8	---	1.3	---	2.0	---	3.6	.52	---
TOTAL	15.65	25.32	34.21	90.96	67.79	178.91	247.62	90.74	70.75	37.29	36.19	18.76
MEAN	.50	.84	1.10	2.93	2.42	5.77	8.25	2.93	2.36	1.20	1.17	.63
MAX	7.2	10	5.9	18	8.4	38	66	17	32	12	15	6.8
MIN	.05	.16	.33	.25	.58	.68	.82	.39	.34	.16	.08	.03
CFSM	.42	.70	.92	2.44	2.02	4.81	6.87	2.44	1.97	1.00	.97	.52
IN.	.49	.78	1.06	2.82	2.10	5.55	7.68	2.81	2.19	1.16	1.12	.58

CAL YR 1982 TOTAL 810.35 MEAN 2.22 MAX 94 MIN .00 CFSM 1.85 IN. 25.12
WTR YR 1983 TOTAL 914.19 MEAN 2.50 MAX 66 MIN .03 CFSM 2.08 IN. 28.34

01403060 RARITAN RIVER BELOW CALCO DAM, AT BOUND BROOK, NJ

LOCATION.--Lat 40°33'05", long 74°32'54", Somerset County, Hydrologic Unit 02030105, on right bank 1,000 ft downstream from Calco Dam and Cuckold Brook, 1,400 ft upstream of bridge on Interstate 287, 1.2 mi downstream from Millstone River, and 1.2 mi southwest of Bound Brook.

DRAINAGE AREA.--785 mi² (includes 11 mi² which drains into the Delaware and Raritan Canal).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1903 to March 1909, October 1944 to current year. Monthly discharge only for some periods, published in WSP 1302. Prior to October 1966 published as "Raritan River at Bound Brook" (station 01403000).

REVISED RECORDS.--WSP 1552: 1903-07, 1946(M), 1949, 1952(P).

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Sept. 12, 1903 to Mar. 31, 1909, nonrecording gages at highway bridge, 1.2 mi downstream at different datum. October 1944 to Sept. 30, 1966, water-stage recorder and concrete control at site 1,120 ft upstream at datum 18.06 ft higher.

REMARKS.--Water-discharge records good. Water diverted 1.2 mi above station by Elizabethtown Water Co. for municipal supply (see Raritan River Basin, diversions). Flow regulated by Spruce Run and Round Valley Reservoirs (see Raritan River Basin, reservoirs in). Diversions to and releases from Round Valley Reservoir (see Raritan River Basin, diversions and station 01399690). Slight diurnal fluctuations at low flow.

AVERAGE DISCHARGE.--44 years, (water years 1904-08, 1945-83), 1,275 ft³/s, adjusted for diversion by Elizabethtown Water Co. since 1944, and change in contents in Spruce Run Reservoir since 1964 and Round Valley Reservoir since 1966.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 46,100 ft³/s Aug. 28, 1971, elevation, 37.47 ft, from floodmark; minimum daily, 37 ft³/s Sept. 6, 1964.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 12,000 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Elevation (ft)	Date	Time	Discharge (ft³/s)	Elevation (ft)
Mar. 22	0100	14000	26.57	Apr. 16	2315	*28100	31.84
Mar. 28	1100	12200	25.72	May 27	0945	12000	25.63
Apr. 11	0215	18000	28.18				

Minimum discharge, 67 ft³/s Oct. 14, elevation, 16.34 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	123	135	703	277	962	1290	1750	1600	2410	360	268	217
2	159	160	1250	269	933	4960	1430	1400	1750	317	223	172
3	142	143	800	251	4090	3090	7130	1290	1310	266	205	168
4	171	141	638	238	2650	1850	6480	1340	2040	242	139	162
5	147	383	525	300	1550	1410	3400	1210	1980	233	157	158
6	130	393	474	1160	1100	1150	2250	1020	1750	223	149	138
7	152	202	453	828	1030	1330	1890	908	1660	205	140	135
8	162	190	369	575	1000	2240	2620	843	1060	181	126	132
9	182	181	315	461	907	3730	6500	882	840	147	157	138
10	155	166	267	438	749	4640	8950	762	707	154	137	150
11	141	150	273	5380	448	4320	13000	667	636	166	282	139
12	136	142	287	2530	346	4270	6140	622	575	136	1560	169
13	138	1180	228	1330	704	3310	3610	579	519	134	520	314
14	133	1120	234	898	707	2210	2610	552	437	135	370	143
15	184	504	280	1050	655	1750	2190	555	382	151	260	139
16	167	373	1020	1420	677	1420	13700	804	355	147	194	140
17	147	319	1880	1020	823	1180	19100	1790	344	149	148	154
18	136	268	820	720	1220	1990	7520	1090	338	155	150	142
19	155	229	613	514	1820	9860	4960	776	332	202	138	147
20	131	225	557	475	1630	5660	5130	790	816	544	129	134
21	161	231	534	461	1640	7140	4560	990	867	285	122	187
22	160	215	470	429	2440	9950	3600	1860	699	231	137	772
23	143	197	412	1140	3320	5110	2810	4530	529	194	161	301
24	141	185	416	3730	3300	2830	3850	2240	427	234	134	192
25	191	181	430	2840	2630	2020	8250	1420	329	292	135	224
26	549	171	414	2020	1990	1630	6070	1480	279	198	141	175
27	441	178	362	1370	1420	1620	3670	9370	245	152	141	135
28	229	187	342	1070	1260	9710	2600	4230	377	127	148	128
29	232	1400	354	912	---	4960	2150	2600	1130	145	686	133
30	187	1180	326	830	---	2840	1870	3930	539	146	311	218
31	171	---	294	988	---	2110	---	3430	---	573	313	---
TOTAL	5596	10729	16340	35924	42001	111580	159790	55760	25662	6824	7881	5656
MEAN	181	358	527	1159	1500	3599	5326	1799	855	220	254	189
MAX	549	1400	1880	5380	4090	9950	19100	9370	2410	573	1560	772
MIN	123	135	228	238	346	1150	1430	552	245	127	122	128

CAL YR 1982 TOTAL 341826 MEAN 937 MAX 15400 MIN 123
WTR YR 1983 TOTAL 483743 MEAN 1325 MAX 19100 MIN 122

01403150 WEST BRANCH MIDDLE BROOK NEAR MARTINSVILLE, NJ

LOCATION.--Lat 40°36'44", long 74°35'28", Somerset County, Hydrologic Unit 02030105, on left bank 150 ft upstream from bridge on Crim Road, 1.4 mi northwest of Martinsville, and 1.8 mi upstream from confluence with East Branch Middle Brook.

DRAINAGE AREA.--1.99 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1979 to current year.

GAGE.--Water-stage recorder. Datum of gage is 240.48 ft National Geodetic Vertical Datum of 1929 (levels by Somerset County).

REMARKS.--Water-discharge records fair.

COOPERATION.--Gage-height record collected in cooperation with Somerset County.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 816 ft^3/s May 11, 1981, gage height, 5.60 ft; no flow Sept. 19-30, 1980.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 200 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 18	2340	201	4.22	Apr. 10	1205	286	4.52
Mar. 18	1745	161	4.04	Apr. 16	0725	*331	4.66
Mar. 21	1130	228	4.33	May 22	2250	286	4.52
Mar. 27	2225	289	4.53	May 26	1815	226	4.32
Apr. 3	0835	177	4.11				

Minimum discharge, 0.04 ft^3/s Sept. 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.11	.14	4.1	.45	3.0	8.9	2.5	2.3	2.4	.34	.18	.07
2	.11	.15	2.1	.40	7.6	14	2.2	2.2	1.9	.32	.25	.06
3	.11	.18	1.2	.33	16	3.2	37	2.1	1.8	.24	.14	.06
4	.12	.33	1.2	.22	3.1	2.4	4.7	2.8	6.7	.23	.25	.05
5	.12	2.6	.84	6.3	1.7	2.0	3.1	2.0	2.4	.24	.16	.05
6	.13	.68	1.5	6.2	1.4	1.9	2.7	1.9	2.2	.23	.16	.05
7	.13	.47	.85	1.7	1.8	2.9	2.7	1.8	1.9	.20	.15	.05
8	.14	.36	.62	1.3	1.4	14	24	1.9	1.6	.20	.15	.04
9	.15	.34	.58	.96	1.3	9.7	10	2.0	1.4	.22	.14	.06
10	.15	.28	.51	11	1.2	19	61	1.9	1.3	.19	.13	.06
11	.15	.29	.63	19	2.1	5.1	7.8	1.9	1.2	.20	3.8	.06
12	.16	.35	.58	2.4	7.8	6.7	4.3	2.0	1.1	.20	.38	.12
13	.17	15	.40	1.5	2.7	3.0	3.4	2.0	.99	.17	.11	.09
14	.18	.91	.37	1.2	1.8	2.4	3.1	2.0	.87	.17	.10	.07
15	.17	.49	.52	1.5	1.6	2.2	3.1	1.9	.77	.17	.10	.07
16	.17	.30	7.0	1.6	1.5	2.0	85	5.6	.67	.19	.10	.07
17	.16	.26	1.7	1.4	2.6	1.9	7.9	3.0	.67	.15	.10	.08
18	.17	.19	1.0	1.1	5.3	33	4.6	1.9	.66	.16	.13	.08
19	.17	.18	.90	1.0	4.8	21	8.9	1.8	.92	.21	.12	.08
20	.18	.14	1.1	1.0	3.8	4.4	11	2.5	1.3	.27	.10	.09
21	.18	.14	1.1	1.0	4.8	49	5.1	5.5	1.2	.24	.09	2.3
22	.18	.14	.82	.92	11	6.1	3.8	20	.72	.18	.08	.73
23	.18	.14	.80	15	12	3.3	3.2	12	.57	.16	.08	.11
24	.18	.16	1.2	12	6.5	2.8	12	5.5	.53	.51	.08	.10
25	1.4	.14	.92	5.8	4.4	2.5	20	2.0	.37	.28	.08	.09
26	3.9	.16	.93	3.7	2.7	2.3	4.5	43	.31	.22	.08	.09
27	.43	.15	.69	2.2	2.1	32	3.4	18	.28	.16	.09	.08
28	.15	.30	.73	1.8	2.3	15	3.0	3.4	4.3	.14	.10	.08
29	.14	11	.71	1.6	---	4.2	2.6	8.4	1.3	.13	.22	.06
30	.14	1.2	.48	2.2	---	3.1	2.4	8.1	.47	.16	.09	.09
31	.14	---	.45	4.4	---	2.8	---	3.4	---	.24	.07	---
TOTAL	9.97	37.17	36.53	111.18	118.3	282.8	349.0	174.8	42.80	6.72	7.81	5.09
MEAN	.32	1.24	1.18	3.59	4.22	9.12	11.6	5.64	1.43	.22	.25	.17
MAX	3.9	15	7.0	19	16	49	85	43	6.7	.51	3.8	2.3
MIN	.11	.14	.37	.22	1.2	1.9	2.2	1.8	.28	.13	.07	.04
CFSM	.16	.62	.59	1.80	2.12	4.58	5.83	2.83	.72	.11	.13	.09
IN.	.19	.69	.68	2.08	2.21	5.29	6.52	3.27	.80	.13	.15	.10

CAL YR 1982 TOTAL 993.71 MEAN 2.72 MAX 129 MIN .05 CFSM 1.37 IN. 18.58
WTR YR 1983 TOTAL 1182.17 MEAN 3.24 MAX 85 MIN .04 CFSM 1.63 IN. 22.10

01403160 WEST BRANCH MIDDLE BROOK NEAR SOMERVILLE, NJ

LOCATION.--Lat 40°36'28", long 74°35'11", Somerset County, Hydrologic Unit 02030105, on left bank 150 ft upstream from bridge on Tullo Road, 2.4 mi northeast of Somerville, and 1.4 mi upstream from confluence with East Branch Middle Brook.

DRAINAGE AREA.--3.83 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1982 to September 1983.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 226.12 ft National Geodetic Vertical Datum of 1929 (levels by Bridgewater Township).

REMARKS.--Water-discharge records good except those for periods of no gage height record, Oct. 1 to Nov. 3 and Jan. 28 to Mar. 18, which are fair.

COOPERATION.--Gage-height record collected in cooperation with Bridgewater Township.

EXTREMES FOR PERIOD OCTOBER TO SEPTEMBER.--Peak discharges above base of 200 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Jan. 11	0015	344	3.05	Apr. 10	1225	445	3.30
Mar. 18	---	280	---	Apr. 16	0740	*481	3.38
Mar. 21	1130	363	3.10	May 22	2320	344	3.05
Mar. 27	2220	445	3.30	May 26	1855	321	2.99
Apr. 3	0830	295	2.92				

Minimum discharge, 0.08 ft³/s part of each day Sept. 8-12, 19-21, gage height 1.06 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.21	.29	7.7	1.2	6.7	14	6.4	5.7	5.8	.87	.40	.20
2	.21	.29	4.5	1.2	11	25	5.5	5.2	4.5	.83	.39	.17
3	.21	.45	2.7	1.1	27	13	74	4.9	3.8	.72	.24	.17
4	.24	.84	2.5	.92	8.0	7.6	12	7.0	14	.68	.35	.16
5	.24	3.3	2.0	9.3	4.0	5.0	8.5	4.6	4.9	.66	.30	.16
6	.26	.68	3.3	13	2.7	6.0	7.1	3.7	4.7	.62	.26	.15
7	.26	.52	2.0	3.6	3.5	25	6.9	3.3	3.8	.56	.23	.15
8	.28	.49	1.7	2.6	2.7	78	48	3.3	3.0	.54	.20	.13
9	.30	.42	1.6	2.1	2.4	54	24	3.3	2.4	.54	.19	.13
10	.30	.38	1.3	14	2.2	110	117	2.7	2.1	.49	.18	.13
11	.30	.36	1.5	46	4.5	16	22	2.1	1.9	.47	4.4	.10
12	.32	.40	1.4	6.5	10	21	12	1.8	1.7	.46	.75	.59
13	.34	26	1.1	4.0	7.0	9.6	9.0	1.7	1.5	.45	.33	.23
14	.36	2.6	1.0	3.1	4.5	6.2	7.9	1.6	1.4	.43	.27	.16
15	.35	1.7	1.1	4.0	3.1	5.0	7.4	1.9	1.3	.43	.27	.15
16	.34	1.3	13	3.9	3.1	4.5	150	6.5	1.2	.43	.26	.17
17	.33	1.1	3.8	3.1	4.5	8.5	19	4.7	1.1	.36	.27	.17
18	.34	1.1	2.2	2.4	6.0	58	10	2.2	1.1	.34	.34	.19
19	.34	.91	2.0	2.1	4.5	18	17	2.0	1.4	.69	.32	.14
20	.36	.87	2.2	2.2	3.6	9.7	21	4.2	1.9	1.3	.28	.11
21	.36	.90	2.1	1.7	7.8	85	9.9	8.7	1.9	.37	.22	1.3
22	.36	.98	1.8	1.7	16	17	7.5	23	1.2	.32	.23	.65
23	.36	1.0	1.7	28	18	9.5	6.4	27	1.1	.31	.24	.17
24	.36	1.0	2.5	22	13	7.8	29	12	.97	.67	.23	.19
25	1.7	.67	1.9	12	9.4	6.6	50	4.7	.85	.40	.21	.22
26	5.6	.61	2.0	8.3	7.0	5.7	12	60	.80	.33	.16	.17
27	1.5	.50	1.6	5.5	5.2	54	9.6	43	.75	.30	.18	.20
28	.29	.71	1.7	4.5	8.0	38	8.8	8.6	5.7	.27	.20	.20
29	.29	19	1.7	3.9	---	11	7.5	17	2.3	.24	.30	.20
30	.29	2.7	1.3	4.8	---	8.0	6.6	17	.97	.37	.24	.39
31	.29	---	1.2	9.0	---	7.1	---	8.3	---	.40	.21	---
TOTAL	17.29	72.07	78.1	227.72	205.4	743.8	732.0	301.7	80.04	15.85	12.65	7.25
MEAN	.56	2.40	2.52	7.35	7.34	24.0	24.4	9.73	2.67	.51	.41	.24
MAX	5.6	26	13	46	27	110	150	60	14	1.3	4.4	1.3
MIN	.21	.29	1.0	.92	2.2	4.5	5.5	1.6	.75	.24	.16	.10
CFSM	.15	.63	.66	1.92	1.92	6.27	6.37	2.54	.70	.13	.11	.06
IN.	.17	.70	.76	2.21	2.00	7.22	7.11	2.93	.78	.15	.12	.07

WTR YR 1983 TOTAL 2493.87 MEAN 6.83 MAX 150 MIN .10 CFSM 1.78 IN. 24.22

01403300 RARITAN RIVER AT QUEENS BRIDGE AT BOUND BROOK, NJ
(National stream-quality accounting network and Pesticide program station)

LOCATION.--Lat 40°33'34", long 74°31'41", Somerset County, Hydrologic Unit 02030105, at Queens Bridge on Main street in Bound Brook, 1.7 mi upstream of Fieldsville Dam.

DRAINAGE AREA.--804 mi².

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1964 to 1969, 1971 to 1973, 1978 and November 1981 to present. Published as "at Bound Brook" (sta. 01403000) 1964-66, and as "below Calco Dam at Bound Brook" (sta. 01403060) 1967-69.

REMARKS.--Instantaneous discharges are determined at Raritan River below Calco Dam at Bound Brook (sta. 01403060).

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL KF AGAR (COLS. PER 100 ML)
NOV 22...	1000	219	351	7.8	10.0	4.1	12.0	105	7.8	67	360
MAR 24...	1200	2620	164	6.7	5.5	1.6	12.5	98	1.8	160	360
JUN 22...	1100	700	239	7.8	21.5	10	8.5	95	2.2	1400	4300
AUG 16...	1100	196	273	7.5	24.0	4.0	8.4	98	4.8	5100	1900

DATE	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)
NOV 22...	97	25	8.4	29	3.1	54	43	36	.20	7.0
MAR 24...	52	13	4.8	11	1.6	25	23	14	<.10	11
JUN 22...	78	20	6.8	15	2.3	47	28	22	.20	9.9
AUG 16...	83	22	6.7	18	3.1	41	36	26	.20	7.5

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P)
NOV 22...	209	10	5.9	100	1.60	1.20	2.1	.320	.240	.220
MAR 24...	105	29	205	95	1.80	.180	.60	.140	.040	.030
JUN 22...	143	20	38	97	1.60	.190	.80	.220	.170	.140
AUG 16...	149	10	5.3	100	1.80	.430	.80	.300	.300	.300

01403300 RARITAN RIVER AT QUEENS BRIDGE AT BOUND BROOK, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	BERYLLIUM, DISSOLVED (UG/L AS BE)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)
NOV 22...	1000	--	2	66	<1	<1	<1	<3	4	51	1
MAR 24...	1200	20	1	100	<0	<1	<1	<3	4	34	8
JUN 22...	1100	<10	1	61	<0	<1	1	<3	4	12	2
AUG 16...	1100	10	3	72	<0	<1	<1	<3	3	14	<1

DATE	LITHIUM DISSOLVED (UG/L AS LI)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY DISSOLVED (UG/L AS HG)	MOLYBDENUM, DISSOLVED (UG/L AS MO)	NICKEL, DISSOLVED (UG/L AS NI)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)	STRONTIUM, DISSOLVED (UG/L AS SR)	VANADIUM, DISSOLVED (UG/L AS V)	ZINC, DISSOLVED (UG/L AS ZN)
NOV 22...	5	67	.5	<10	8	<1	6	210	<6	6
MAR 24...	<4	44	.5	<10	2	<1	<1	75	<6	8
JUN 22...	8	27	.4	<10	5	<1	<1	140	<6	6
AUG 16...	<4	56	.3	<10	5	<1	<1	170	<6	8

01403400 GREEN BROOK AT SEELEY MILLS, NJ

LOCATION.--Lat 40°39'53", long 74°24'10", Somerset County, Hydrologic Unit 02030105, on right bank at Seeley Mills, 250 ft downstream from Blue Brook, 300 ft downstream from bridge on Diamond Hill Road, and 0.5 mi northwest of Scotch Plains.

DRAINAGE AREA.--6.23 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1959-64, 1969: annual maximum, water years 1969-79. June 1979 to current year. Fragmentary records 1944-53 in the files of the Geological Survey. Crest-stage data 1927-38, 1958-68 in files of Union County Park Commission.

REVISED RECORDS.--WDR-NJ 81-1: 1979(M).

GAGE.--Water-stage recorder. Datum of gage is 184.44 ft National Geodetic Vertical Datum of 1929. From 1944 to 1953, water-stage recorder and masonry dam about 400 ft downstream above lower Seeley Mills dam at different datum. From July 1969 to May 1979, crest-stage gage about 450 ft downstream below lower Seeley Mills dam (washed out May 29, 1968) at different datum.

REMARKS.--Water-discharge records fair.

COOPERATION.--Gage-height record collected in cooperation with Somerset County.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,240 ft³/s Aug. 2, 1973, gage height, 16.1 ft, from rating curve extended above 600 ft³/s on basis of slope-area measurement of peak flow, site and datum then in use; no flow part or all of some days in September 1981.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 23, 1938 reached an elevation of 196.5 ft New Jersey Geological Survey datum, above lower Seeley Mills dam.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 250 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Jan. 11	0050	375	3.13	Apr. 10	1255	*630	3.83
Mar. 18	2200	583	3.71	Apr. 16	1105	465	3.39
Mar. 21	1250	576	3.69	May 22	2355	333	3.01
Mar. 27	2255	553	3.63	July 19	1600	461	3.38
Apr. 3	0845	382	3.15				

Minimum discharge, 0.38 ft³/s Nov. 24-28, but may have been less during period of no gage-height record Aug. 10-29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.80	.81	7.2	1.0	9.0	15	16	11	13	2.9	2.7	1.4
2	.71	.96	5.2	1.0	15	39	14	9.7	10	2.6	3.3	1.3
3	.82	1.1	3.7	1.0	27	13	107	9.0	8.7	1.8	2.9	1.4
4	.81	2.0	3.5	.96	11	9.5	31	12	29	1.4	2.9	1.6
5	.73	7.7	3.1	4.8	6.7	7.9	19	7.9	11	1.6	2.6	1.6
6	.78	2.1	3.4	11	5.6	7.2	16	6.5	9.3	1.5	2.5	1.7
7	1.1	1.4	2.7	4.1	6.3	12	15	5.7	7.6	1.2	2.2	1.5
8	1.0	1.3	2.1	3.3	5.3	31	44	5.4	5.9	1.3	2.1	1.6
9	1.5	.99	1.8	3.0	4.7	27	44	5.2	4.8	1.8	1.7	2.2
10	.86	1.2	1.6	10	4.4	67	183	4.7	4.3	1.7	2.2	2.9
11	1.0	1.0	2.2	54	15	34	53	4.5	4.1	2.0	23	3.0
12	1.0	1.2	1.8	7.8	38	50	29	4.3	3.8	2.1	13	5.2
13	2.0	20	1.8	4.8	16	22	21	4.2	3.6	1.9	6.0	3.0
14	2.0	3.3	1.5	4.0	4.9	16	17	4.1	3.4	1.3	2.9	1.2
15	1.0	1.9	2.0	4.4	4.4	13	16	4.9	3.4	1.7	2.6	1.1
16	1.4	1.1	14	4.	4.7	11	208	9.4	3.3	1.6	2.3	1.4
17	1.0	1.6	4.9	3.	7.1	9.7	62	6.7	3.1	1.2	2.2	1.4
18	1.2	.85	3.4	4.0	12	130	31	4.1	3.1	1.1	2.1	1.5
19	1.2	.70	3.2	4.3	11	95	33	4.3	23	27	2.1	2.0
20	2.0	.70	3.2	3.9	9.4	29	38	8.3	10	4.4	1.9	2.4
21	2.5	.70	2.9	3.7	11	151	25	10	5.1	3.7	1.5	8.7
22	1.5	.70	2.1	3.5	18	45	18	15	3.6	3.8	1.4	6.4
23	1.7	.73	1.8	17	21	27	15	46	3.1	2.9	1.5	2.0
24	2.1	.57	3.1	21	17	22	37	14	2.9	6.7	1.4	1.3
25	6.4	.41	2.4	15	13	19	54	8.1	2.4	3.8	1.1	1.4
26	11	.64	2.2	10	9.8	15	28	36	2.0	3.2	1.0	1.6
27	1.7	.61	1.6	8.0	8.0	68	19	55	1.9	3.2	1.2	1.4
28	.89	2.0	1.6	6.6	8.1	79	16	16	13	3.3	8.4	1.2
29	1.0	20	1.7	5.6	---	29	13	20	5.2	3.3	4.5	1.6
30	.76	4.1	1.4	5.8	---	21	12	30	3.1	4.2	1.4	6.0
31	.72	---	1.1	10	---	18	---	19	---	4.1	1.6	---
TOTAL	53.18	82.37	94.2	241.86	323.4	1132.3	1234	401.0	206.7	104.3	108.2	71.0
MEAN	1.72	2.75	3.04	7.80	11.5	36.5	41.1	12.9	6.89	3.36	3.49	2.37
MAX	11	20	14	54	38	151	208	55	29	27	23	8.7
MIN	.71	.41	1.1	.96	4.4	7.2	12	4.1	1.9	1.1	1.0	1.1
CFSM	.28	.44	.49	1.25	1.85	5.86	6.60	2.07	1.11	.54	.56	.38
IN.	.32	.49	.56	1.44	1.93	6.76	7.37	2.39	1.23	.62	.65	.42

CAL YR 1982 TOTAL 2937.62 MEAN 8.05 MAX 221 MIN .41 CFSM 1.29 IN. 17.54
WTR YR 1983 TOTAL 4052.51 MEAN 11.1 MAX 208 MIN .41 CFSM 1.78 IN. 24.20

01403500 GREEN BROOK AT PLAINFIELD, NJ

LOCATION.--Lat 40°36'53", long 74°25'55", Union County, Hydrologic Unit 02030105, on left bank 20 ft downstream from bridge on Sycamore Avenue in Plainfield, and 1.0 mi upstream from Stony Brook.

DRAINAGE AREA.--9.75 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1938 to current year.

REVISED RECORDS.--WSP 921: 1938-40. WRD-NJ 1969: 1966-68. WRD-NJ 1973: 1968(M), 1969(M), 197(M).

GAGE.--Water-stage recorder, crest-stage gage, and concrete control. Datum of gage is 70.37 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records good except those below 1.0 ft³/s, which are fair. Water diverted from Baltusrol well field by Commonwealth Water Co., and from wells in vicinity of Mountainside and Scotch Plains by Plainfield-Union Water Co., for municipal supply and from private and industrial wells in Plainfield and vicinity. Diurnal fluctuations at low flow caused by pumping from wells near brook in Plainfield. During extreme high stages there is some overflow above gage from Green Brook basin to adjacent Cedar Brook basin.

AVERAGE DISCHARGE.--45 years, 12.7 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,890 ft³/s July 23, 1938, gage height, 5.82 ft, from rating curve extended above 1,300 ft³/s on basis of contracted-opening measurement of peak flow (an unknown additional amount probably overflowed out of the basin); no flow part or all of some days in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 380 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Jan. 11	0145	421	2.51	Apr. 10	1345	*829	3.51
Mar. 18	2230	715	3.24	Apr. 16	1015	651	3.08
Mar. 21	1245	786	3.41	June 19	2015	550	2.84
Mar. 27	2345	683	3.16	July 19	1530	517	2.76
Apr. 3	0915	542	2.82	Aug. 11	1830	400	2.46

Minimum daily discharge, 0.10 ft³/s Oct. 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.86	.62	14	1.3	9.3	20	16	13	16	3.5	2.6	1.3
2	.81	.56	7.8	1.2	15	63	13	12	13	3.2	2.9	1.0
3	.67	.52	4.1	1.2	38	17	185	12	11	3.0	2.2	1.1
4	.64	.99	3.7	1.2	13	12	47	18	51	2.7	2.2	1.1
5	.60	16	2.9	8.9	8.6	9.7	25	10	15	2.7	2.2	1.1
6	.59	1.7	3.6	21	7.5	8.7	20	8.5	15	2.7	2.3	1.1
7	.63	.86	2.5	6.0	9.4	19	17	7.6	11	2.2	2.2	.95
8	.67	.82	1.9	4.3	8.3	54	84	7.3	8.1	1.8	2.0	.89
9	.80	.74	1.6	3.5	7.0	40	74	6.8	6.9	1.8	1.8	.86
10	.61	.70	1.2	14	6.3	107	275	6.3	6.1	1.8	1.5	.93
11	.37	.68	1.9	88	21	47	95	5.8	5.8	1.9	46	.93
12	.46	.67	1.6	11	55	78	43	5.6	5.4	1.9	21	11
13	.73	44	1.2	6.8	24	28	29	5.4	5.0	1.8	4.5	4.4
14	1.4	4.5	1.1	6.8	7.5	19	23	5.5	4.7	1.5	2.7	1.1
15	.55	2.6	1.6	6.9	10	15	20	7.4	4.5	1.6	2.4	.92
16	.38	1.9	25	10	12	12	325	19	4.4	2.1	2.2	.92
17	.40	2.2	6.8	11	16	10	107	12	4.2	1.5	2.0	1.1
18	.10	1.3	3.5	4.3	19	170	46	6.0	4.0	1.3	2.0	.94
19	.28	.97	3.0	4.4	15	142	56	6.5	64	61	2.0	.96
20	.35	.91	3.2	4.4	12	38	59	15	20	6.4	1.7	.93
21	.94	.90	2.8	6.1	14	218	37	14	7.9	3.3	1.3	26
22	.59	.92	2.3	4.4	21	63	26	23	4.8	4.9	1.3	11
23	.43	.92	2.2	32	26	32	21	73	4.0	2.8	1.5	1.7
24	.44	.84	3.4	25	21	23	70	18	3.7	11	1.2	1.0
25	12	.74	2.4	19	15	19	90	10	3.5	4.6	.98	.95
26	26	.75	2.4	13	11	14	37	64	3.3	2.9	1.0	1.0
27	2.5	.89	1.9	8.4	8.9	80	25	88	3.2	2.4	1.2	1.0
28	1.0	2.6	2.0	7.4	8.7	136	20	21	39	2.3	17	.92
29	.87	43	2.1	7.7	---	35	17	28	11	2.3	6.0	.86
30	.75	5.4	1.5	8.8	---	22	15	52	4.1	9.1	1.7	12
31	.68	---	1.4	12	---	18	---	25	---	5.9	1.5	---
TOTAL	58.10	140.20	116.6	360.0	439.5	1569.4	1917	605.7	359.6	157.9	143.08	89.96
MEAN	1.87	4.67	3.76	11.6	15.7	50.6	63.9	19.5	12.0	5.09	4.62	3.00
MAX	26	44	25	88	55	218	325	88	64	61	46	26
MIN	.10	.52	1.1	1.2	6.3	8.7	13	5.4	3.2	1.3	.98	.86

CAL YR 1982 TOTAL 3916.60 MEAN 10.7 MAX 298 MIN .08
WTR YR 1983 TOTAL 5957.04 MEAN 16.3 MAX 325 MIN .10

01403535 EAST BRANCH STONY BROOK AT BEST LAKE AT WATCHUNG, NJ

LOCATION.--Lat 40°38'25", long 74°26'52", Somerset County, Hydrologic Unit 02030105, 700 ft upstream of dam on Best Lake in Watchung, 1,400 ft upstream of mouth, and 2.5 mi west of Plainfield railroad station.

DRAINAGE AREA.--1.57 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1980 to current year.

GAGE.--Water-stage recorder above concrete dam. Datum of gage is 193.87 ft National Geodetic Vertical Datum of 1929 (levels by Somerset County).

REMARKS.--Water-discharge records fair. Records given herein represent flow over dam and leakage.

COOPERATION.--Gage-height record collected in cooperation with Somerset County.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 244 ft³/s Jan. 4, 1982, gage height, 2.06 ft; no flow many days in 1980 and 1981.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of August 3, 1973, reached a stage of 5.4 ft, present datum, from floodmarks, discharge, 2,840 ft³/s by computation of flow over dam, embankment and road.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 100 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Jan. 11	0010	116	1.73	Apr. 10	1240	*172	1.88
Mar. 18	2210	139	1.79	Apr. 16	1040	124	1.75
Mar. 21	1145	154	1.83	July 19	1525	147	1.81

Minimum daily discharge, 0.04 ft³/s Sept. 10, 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.33	.69	2.4	.58	3.3	5.1	3.5	3.7	3.1	.58	.28	.19
2	.30	.65	1.9	.58	4.5	12	3.2	3.5	2.5	.55	.23	.16
3	.33	.60	1.1	.55	8.0	4.9	24	2.8	2.1	.47	.20	.12
4	.35	.60	1.0	.48	3.0	4.0	6.8	3.5	7.0	.42	.22	.10
5	.45	.75	.78	1.3	1.7	3.2	4.8	2.4	3.1	.39	.20	.12
6	.49	.48	.80	3.1	1.3	2.4	4.1	2.0	2.8	.34	.26	.11
7	.39	.42	.65	1.3	1.5	3.7	3.9	1.8	2.3	.31	.23	.09
8	.30	.41	.52	.97	1.0	9.9	15	1.7	1.8	.29	.20	.06
9	.34	.42	.55	.81	.75	7.7	12	1.4	1.4	.29	.14	.05
10	.53	.80	.71	4.0	.59	15	41	1.2	1.2	.30	.10	.04
11	.22	1.0	.90	14	.59	7.5	11	1.2	1.1	.29	3.1	.04
12	.28	1.2	.77	2.8	.72	12	7.0	1.1	1.0	.29	1.4	.27
13	.34	4.8	.67	1.7	.49	5.5	5.6	1.0	.88	.27	.43	.47
14	.46	.79	.59	1.2	.50	4.4	4.7	.90	.74	.28	.28	.21
15	.33	.54	.62	1.7	.61	3.9	4.4	1.1	.68	.28	.24	.16
16	.28	.47	7.0	1.7	.87	3.3	47	2.4	.64	.24	.20	.14
17	.21	.42	3.5	1.4	1.9	3.2	13	1.9	.58	.25	.20	.12
18	.29	.42	1.7	1.1	3.8	32	7.8	1.0	.58	.48	.20	.16
19	.45	.39	.87	.69	3.6	20	9.2	.95	4.8	7.1	.20	.17
20	.55	.42	.86	.58	3.1	8.4	10	2.1	2.2	.94	.18	.13
21	.51	.52	.71	.50	3.7	34	7.5	2.1	1.3	.46	.12	.93
22	.46	.61	.60	.42	6.3	9.8	5.9	4.6	.91	.38	.11	1.4
23	.54	.67	.58	1.0	7.4	7.0	5.1	10	.67	.25	.11	.43
24	.68	.57	.72	8.7	5.8	5.9	11	3.3	.59	.47	.11	.26
25	2.1	.35	.67	5.2	4.3	4.4	12	2.1	.48	.36	.09	.21
26	2.5	.35	.66	3.5	3.2	3.5	6.8	10	.47	.23	.08	.18
27	.55	.32	.58	2.1	2.7	23	5.6	14	.47	.20	.06	.19
28	.44	.36	.65	1.7	2.6	9.3	5.1	4.1	3.9	.20	.16	.17
29	.42	5.9	.62	1.2	---	6.0	4.6	5.3	1.7	.18	.46	.16
30	.39	1.2	.54	1.6	---	4.6	4.2	7.2	.70	.21	.18	.76
31	.51	---	.51	4.2	---	4.1	---	4.4	---	.48	.18	---
TOTAL	16.32	27.12	34.73	70.66	77.82	279.7	305.8	104.75	51.69	17.78	10.15	7.60
MEAN	.53	.90	1.12	2.28	2.78	9.02	10.2	3.38	1.72	.57	.33	.25
MAX	2.5	5.9	7.0	14	8.0	34	47	14	7.0	7.1	3.1	1.4
MIN	.21	.32	.51	.42	.49	2.4	3.2	.90	.47	.18	.06	.04
CFSM	.34	.57	.71	1.45	1.77	5.75	6.50	2.15	1.10	.36	.21	.16
IN.	.39	.64	.82	1.67	1.84	6.63	7.25	2.48	1.22	.42	.24	.18

CAL YR 1982 TOTAL 773.60 MEAN 2.12 MAX 66 MIN .13 CFSM 1.35 IN. 18.33
WTR YR 1983 TOTAL 1004.12 MEAN 2.75 MAX 47 MIN .04 CFSM 1.75 IN. 23.79

01403540 STONY BROOK AT WATCHUNG, NJ

LOCATION.--Lat 40°38'12", long 74°27'06", Somerset County, Hydrologic Unit 02030105, on right bank at Watchung Borough Administration Building, 150 ft downstream from Watchung Avenue Bridge, and 2.9 mi upstream from confluence with Green Brook.

DRAINAGE AREA.--5.51 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1974 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 172.24 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records good. Occasional regulation from Watchung and Best Lakes directly upstream from station.

AVERAGE DISCHARGE.--9 years, 10.3 ft³/s, 25.39 in/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,420 ft³/s July 14, 1975, gage height, 10.40 ft, from rating curve extended above 500 ft³/s on basis of slope-area measurements of peak flow; no flow all or part of Sept. 13, 18-20, 1982.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Aug. 2, 1973, reached a stage of 14.5 ft, from floodmark, discharge, 11,400 ft³/s, from slope-area measurements of peak flow.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 250 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Jan. 11	0045	328	3.95	Apr. 3	0815	380	4.17
Mar. 18	2215	467	4.51	Apr. 10	1220	*773	5.42
Mar. 21	1150	677	5.18	Apr. 16	0820	598	4.96
Mar. 27	2235	685	5.20	May 22	2400	305	3.85

Minimum discharge, 0.29 ft³/s Sept. 8-12, gage height, 0.81 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.1	.97	8.1	2.3	10	18	12	5.2	13	3.0	1.2	.58
2	.97	1.1	7.2	2.3	15	45	11	15	11	2.7	1.0	.52
3	.87	1.0	4.3	2.2	31	16	90	7.6	9.1	2.3	.80	.46
4	.82	1.3	3.9	2.0	13	12	23	4.5	29	2.0	.76	.43
5	.74	5.5	3.5	3.7	8.6	10	16	3.7	14	2.0	.76	.38
6	.76	2.3	3.4	14	7.3	8.8	14	3.4	13	1.8	.68	.36
7	.83	1.5	3.0	5.3	7.9	14	12	3.3	12	1.6	.80	.34
8	.83	1.4	2.6	4.3	6.6	37	56	3.8	8.5	1.5	.73	.29
9	.77	1.2	2.5	3.7	5.7	27	40	4.8	6.7	1.4	.64	.29
10	.83	1.1	2.4	7.0	5.2	52	173	4.3	5.9	1.4	.50	.29
11	.75	1.1	2.6	53	4.9	25	39	4.0	5.4	1.3	9.8	.29
12	.68	1.2	2.8	9.4	5.6	41	25	3.8	4.9	1.3	6.2	.88
13	.81	17	2.3	6.0	5.1	19	20	3.5	4.4	1.2	2.2	1.1
14	1.0	4.1	2.0	4.9	4.6	15	17	3.2	4.0	1.1	1.2	.73
15	.89	2.9	2.1	6.0	4.7	13	15	3.4	3.6	1.1	1.0	.57
16	.78	2.3	12	5.7	5.1	11	199	7.0	3.4	1.1	.92	.48
17	.69	2.1	6.0	4.8	7.1	9.9	42	9.7	3.2	.85	.83	.41
18	.62	1.9	4.1	4.1	13	110	26	5.0	3.0	.86	.80	.59
19	.66	1.8	3.6	3.7	13	66	32	2.5	7.9	16	.81	.59
20	.72	1.7	3.6	3.5	11	23	35	3.9	9.3	3.8	.70	.45
21	.95	1.7	3.4	3.3	12	132	24	5.6	5.1	1.6	.54	2.7
22	.78	1.6	3.0	3.1	21	31	18	14	4.2	1.3	.49	5.0
23	.72	1.6	2.9	19	25	21	16	38	3.4	.96	.49	1.5
24	.69	1.7	3.3	24	20	17	48	9.5	3.0	2.1	.44	.92
25	2.7	1.5	3.1	16	16	14	48	5.9	2.6	1.8	.41	.74
26	11	1.5	3.1	12	12	12	25	37	2.3	1.2	.41	.65
27	2.6	1.6	2.8	8.4	10	79	32	51	2.2	.97	.37	.67
28	1.5	1.9	2.8	6.9	9.8	57	21	17	13	.86	.63	.61
29	1.3	21	2.7	6.1	---	22	14	22	8.6	.81	1.1	.57
30	1.2	5.0	2.5	6.7	---	16	5.4	29	3.6	1.1	.70	2.6
31	.97	---	2.3	12	---	14	---	18	---	2.6	.60	---
TOTAL	40.53	92.57	113.9	265.4	310.2	987.7	1148.4	348.6	219.3	63.61	38.51	25.99
MEAN	1.31	3.09	3.67	8.56	11.1	31.9	38.3	11.2	7.31	2.05	1.24	.87
MAX	11	21	12	53	31	132	199	51	29	16	9.8	5.0
MIN	.62	.97	2.0	2.0	4.6	8.8	5.4	2.5	2.2	.81	.37	.29
CFSM	.24	.56	.67	1.55	2.01	5.79	6.95	2.03	1.33	.37	.23	.16
IN.	.27	.62	.77	1.79	2.09	6.67	7.75	2.35	1.48	.43	.26	.18

CAL YR 1982 TOTAL 2881.17 MEAN 7.89 MAX 293 MIN .00 CFSM 1.43 IN. 19.45
WTR YR 1983 TOTAL 3654.71 MEAN 10.0 MAX 199 MIN .29 CFSM 1.81 IN. 24.67

01404302 LAWRENCE BROOK AT DAVIDSONS MILL ROAD NEAR PATRICKS CORNER, NJ

LOCATION.--Lat 40°24'58", long 74°29'38", Middlesex County, Hydrologic Unit 02030105, at bridge on Davidsons Mill Road, 1,000 ft upstream of Oakeys Brook, 1.0 mi southwest of Patricks Corner, 1.5 mi west of Paulas Corners, and 2.3 mi south of Adams.

DRAINAGE AREA.--12.4 mi².

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976 to May 1983 (discontinued).

COOPERATION.--Analyses of fecal coliform and fecal streptococci by the MPN method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, FECAL, EC BROTH (MPN)	STREPTOCOCCI FECAL (MPN)	HARDNESS (MG/L AS CACO3)
JAN										
13...	1030	144	6.8	4.5	11.8	90	1.7	540	920	29
MAR										
16...	1030	95	6.0	9.0	11.2	96	1.1	5	2	25
MAY										
26...	1100	128	6.5	18.0	--	--	1.6	80	130	22

DATE	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	SULFIDE TOTAL (MG/L AS S)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)
JAN									
13...	6.3	3.3	13	1.9	9.0	--	27	13	<.10
MAR									
16...	5.2	2.8	6.6	1.1	4.0	--	21	9.6	<.10
MAY									
26...	5.0	2.4	7.3	1.1	7.0	<.5	20	9.3	<.10

DATE	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHATE, TOTAL (MG/L AS PO4)	CARBON, ORGANIC TOTAL (MG/L AS C)
JAN									
13...	8.9	96	--	--	--	.86	--	.21	6.6
MAR									
16...	8.5	80	<.010	.600	.090	.46	1.1	.12	7.1
MAY									
26...	7.1	90	<.010	.600	.130	.52	1.1	.33	8.8

01404302 LAWRENCE BROOK AT DAVIDSONS MILL ROAD NEAR PATRICKS CORNER, NJ

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
MAY								
26...	1100	240	1	<10	80	2	10	5

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
MAY								
26...	1200	8	60	.1	6	<1	50	1

01405000 LAWRENCE BROOK AT FARRINGTON DAM, NJ

LOCATION.--Lat 40°27'00", long 74°27'05", Middlesex County, Hydrologic Unit 02030105, on left bank 300 ft upstream from Farrington Dam, 0.7 mi southwest of Milltown, and 5.4 mi upstream from mouth.

DRAINAGE AREA.--34.4 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1927 to current year.

REVISED RECORDS.--WSP 781: Drainage area. WSP 1432: 1959(P).

GAGE.--Water-stage recorder above concrete dam. Datum of gage is 25.8 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records fair. Records given herein include flow over dam and through blowoff gates. Gates open Oct. 1 to Nov. 30, Sept. 19-30. Flow regulated by Farrington Reservoir, capacity, 655,250,000 gal.

COOPERATION.--Water-stage recorder inspected by and records of gate openings furnished by employees of City of New Brunswick.

AVERAGE DISCHARGE.--56 years, 38.5 ft³/s, 15.20 in/yr, adjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,920 ft³/s July 21, 1975, gage height, 26.93 ft, from rating curve extended above 1,100 ft³/s on basis of weir formula; no flow at times when gates in dam were closed and water was below spillway.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 450 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Mar. 21	1700	*946	25.58	Apr. 16	1700	752	25.47
Apr. 10	1700	802	25.50				

Minimum daily discharge, 2.2 ft³/s Sept. 26, 27, 28, 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.5	8.4	29	11	22	33	47	51	59	18	19	11
2	8.5	8.4	44	9.8	22	106	42	47	45	16	12	8.7
3	8.4	8.3	24	9.3	43	68	194	46	38	14	8.2	7.2
4	8.4	8.3	18	8.5	33	45	119	52	67	12	7.0	6.6
5	8.4	8.4	17	9.3	22	34	76	50	48	11	6.3	6.2
6	8.3	8.5	17	38	20	29	61	42	36	9.7	6.1	5.7
7	8.3	8.5	16	26	24	45	53	36	30	8.4	5.4	5.0
8	8.3	8.5	14	19	21	85	64	33	25	7.3	4.6	4.0
9	8.3	8.4	12	15	20	93	129	33	22	7.1	3.8	3.3
10	8.3	8.4	11	17	19	125	388	31	21	6.8	3.2	3.0
11	8.2	8.3	11	95	23	89	190	29	20	6.3	11	2.9
12	8.2	8.3	12	49	25	105	115	29	19	6.1	54	2.9
13	8.2	15	11	30	20	70	85	29	18	5.6	20	4.4
14	8.2	40	10.	23	18	50	66	26	16	4.8	13	4.8
15	8.2	23	9.2	90	19	40	60	27	15	4.4	9.6	4.2
16	8.2	18	29	89	23	33	391	70	15	4.1	7.3	3.6
17	8.1	15	35	51	32	30	214	93	14	3.8	6.6	3.2
18	8.1	14	20	31	52	70	117	52	26	3.4	6.0	3.1
19	8.1	12	17	21	64	176	119	39	36	3.5	5.2	3.0
20	8.0	12	17	18	58	78	137	41	24	5.4	4.6	2.8
21	8.0	11	16	16	55	397	110	51	50	5.8	3.8	2.6
22	8.0	10	14	15	65	151	85	84	35	8.8	3.2	2.5
23	8.0	9.7	14	54	75	90	69	127	22	8.3	3.0	2.4
24	7.9	9.2	14	76	71	63	147	71	17	9.6	2.9	2.3
25	7.9	8.6	13	47	54	52	219	48	15	16	2.8	2.3
26	8.2	8.3	13	32	40	46	128	51	14	13	2.7	2.2
27	8.3	8.1	11	26	30	60	95	150	13	9.2	2.7	2.2
28	8.4	8.0	11	21	28	188	78	87	31	7.2	2.5	2.2
29	8.4	35	11	20	---	98	66	67	61	6.3	50	2.2
30	8.4	36	12	20	---	63	58	116	23	8.2	25	2.3
31	8.4	---	11	26	---	53	---	96	---	41	15	---
TOTAL	255.1	393.6	513.2	1012.9	998	2665	3722	1804	875	291.1	326.5	118.8
MEAN	8.23	13.1	16.6	32.7	35.6	86.0	124	58.2	29.2	9.39	10.5	3.96
MAX	8.5	40	44	95	75	397	391	150	67	41	54	11
MIN	7.9	8.0	9.2	8.5	18	29	42	26	13	3.4	2.5	2.2
(†)	-0.	+2.0	-0.3	+0.3	+0.1	+0.1	0	+0.1	-0.5	+0.11	-0.2	-1.3
MEAN‡	7.71	15.1	16.3	33.0	35.7	86.1	124	58.3	28.7	9.50	10.3	2.7
CFSM‡	0.23	0.44	0.47	0.96	1.04	2.50	3.61	1.69	0.83	0.28	0.30	0.08
IN.‡	0.26	0.49	0.55	1.11	1.08	2.89	4.02	1.95	0.93	0.32	0.34	0.09

CAL YR 1982 TOTAL 9107.4 MEAN 25.0 MAX 466 MIN 2.6 MEAN‡ 47.8 CFSM‡ 1.39 IN.‡ 18.92
WTR YR 1983 TOTAL 12975.2 MEAN 35.5 MAX 397 MIN 2.2 MEAN‡ 35.6 CFSM‡ 1.04 IN.‡ 14.03

† Change in contents, in cubic feet per second, in Farrington Reservoir.
‡ Adjusted for change in contents.

01405302 MATCHAPONIX BROOK AT MUNDY AVENUE AT SPOTSWOOD, NJ

LOCATION.--Lat 40°23'22", long 74°22'55", Middlesex County, Hydrologic Unit 02030105, at bridge on Mundy Avenue in Spotswood, 0.2 mi upstream from mouth, 0.5 mi east of De Voe Lake dam, and 3.4 mi southeast of Tanners Corners.

DRAINAGE AREA.--44.1 mi².

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976 to current year.

COOPERATION.--Field data and samples for laboratory analyses supplied by New Jersey Department of Environmental Protection, Division of Water Resources. Analyses of fecal coliform and fecal streptococci by the MPN method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, FECAL, EC BROTH (MPN)	STREPTOCOCCI FECAL (MPN)	HARDNESS (MG/L AS CACO3)
JAN 17...	1020	117	245	5.2	1.5	13.0	E1.3	20	170	44
MAR 15...	1450	90	208	4.2	11.0	10.6	E1.8	<20	4	44
MAY 17...	1200	137	144	4.3	11.0	9.6	2.9	1100	>2400	32
JUL 05...	1245	35	240	6.5	24.0	4.1	<.9	210	540	51
AUG 01...	1100	47	280	5.7	24.0	5.2	E2.1	630	540	56
SEP 21...	1130	--	275	6.6	20.5	3.2	<.5	330	350	54

DATE	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	SULFIDE TOTAL (MG/L AS S)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)
JAN 17...	12	3.5	21	3.1	1.0	--	34	33	.20
MAR 15...	12	3.5	11	2.8	<1.0	--	57	18	.20
MAY 17...	8.7	2.4	8.4	2.2	1.0	<.5	32	11	.10
JUL 05...	14	3.8	18	4.4	<1.0	--	50	24	.20
AUG 01...	16	3.9	23	3.9	1.0	--	46	45	.20
SEP 21...	16	3.5	21	5.0	5.0	--	45	27	.20

DATE	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHATE, TOTAL (MG/L AS PO4)	CARBON, ORGANIC TOTAL (MG/L AS C)
JAN 17...	9.0	128	.020	1.10	.990	1.5	2.6	.40	3.5
MAR 15...	9.0	160	.020	1.10	.980	1.4	2.5	.44	3.2
MAY 17...	6.0	85	.010	.570	.320	1.1	1.7	.70	5.4
JUL 05...	12	158	.070	2.00	2.30	E2.5	--	.46	7.0
AUG 01...	8.8	188	.010	1.20	.960	1.3	2.5	.15	2.3
SEP 21...	12	165	.150	4.50	2.40	2.7	7.2	.55	5.0

01405302 MATCHAPONIX BROOK AT MUNDY AVENUE AT SPOTSWOOD, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
MAY								
17...	1200	360	2	<10	40	1	40	4

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
MAY								
17...	3900	24	160	<.1	8	1	60	<1

01405340 MANALAPAN BROOK AT FEDERAL ROAD NEAR MANALAPAN, NJ

LOCATION.--Lat 40°17'46", long 74°23'53", Middlesex County, Hydrologic Unit 02030105, at bridge on Federal Road, 2.6 mi north of Manalapan, 3.1 mi southwest of Matchaponix, 3.3 mi downstream of Still House Brook, and 4.1 mi northeast of Applegarth.

DRAINAGE AREA.--20.9 mi².

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976 to current year.

COOPERATION.--Field data and samples for laboratory analyses supplied by New Jersey Department of Environmental Protection, Division of Water Resources. Analyses of fecal coliform and fecal streptococci by the MPN method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	(STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
JAN 17...	0915	29	145	5.4	.5	13.6	<1.1	70	1600
MAR 15...	1030	29	144	5.6	8.0	10.6	E1.9	<20	46
MAY 17...	1320	57	104	5.9	12.5	10.5	3.1	9200	>2400
JUL 05...	1345	10	110	6.8	25.0	8.0	E1.8	80	>2400
AUG 01...	1000	E7.0	122	6.9	23.5	7.4	--	80	>2400
SEP 21...	1000	--	116	7.0	20.0	8.5	E1.8	110	>2400

DATE	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
JAN 17...	37	8.7	3.8	7.2	2.7	<1.0	31	13	.20
MAR 15...	34	8.0	3.3	4.8	2.3	1.0	29	10	.20
MAY 17...	30	6.9	3.1	5.8	2.1	4.0	23	9.1	.20
JUL 05...	36	8.5	3.7	5.9	2.5	9.0	20	11	.30
AUG 01...	34	7.8	3.5	5.9	2.7	11	19	12	.20
SEP 21...	--	--	--	--	--	--	--	--	--

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHATE, TOTAL (MG/L AS PO4)	CARBON, ORGANIC TOTAL (MG/L AS C)
JAN 17...	11	88	<.100	1.20	.110	.51	1.7	.28	2.8
MAR 15...	9.5	80	<.010	1.30	<.050	.54	1.8	.21	3.4
MAY 17...	7.9	85	.010	.900	.140	.68	1.6	.44	4.7
JUL 05...	9.6	76	<.010	.800	.120	E.56	--	.31	4.5
AUG 01...	8.0	99	.010	.600	.040	.47	1.1	.37	2.0
SEP 21...	--	--	<.010	.500	<.050	.12	.62	.31	--

01405340 MANALAPAN BROOK AT FEDERAL ROAD NEAR MANALAPAN, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	NITROGEN, NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	CARBON, INORGANIC, TOT IN BOT MAT (G/KG AS C)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (G/KG AS C)	ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)
SEP										
21...	1000	970	.3	4.9	<1	<1	7	<10	9	23000

DATE	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)	MERCURY RECOV. FM BOTTOMCMATERIAL (UG/L AS HG)	NICKEL, RECOV. FM BOTTOM MATERIAL (UG/G AS NI)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	PCB, TOTAL IN BOTTOM MATERIAL (UG/KG)	PCN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)
SEP										
21...	10	60	.01	<10	<1	30	200	<1.0	<.1	64

DATE	DDD, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIAZINON, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDOSULFAN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ETHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)
SEP										
21...	8.3	18	<.1	<.1	.5	<.1	<.1	<.1	<.1	<.1

DATE	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)	MALATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	METHOXYCHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARATHION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRITHION, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL IN BOTTOM MATERIAL (UG/KG)	PARATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	PERTHANE IN BOTTOM MATERIL (UG/KG)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)	TRITHION, TOTAL IN BOTTOM MATERIAL (UG/KG)
SEP										
21...	<.1	<.1	<.1	<.1	<.1	<.1	<.1	<1.00	<10	<.1

01405400 MANALAPAN BROOK AT SPOTSWOOD, NJ

LOCATION.--Lat 40°23'22", long 74°23'27", Middlesex County, Hydrologic Unit 02030105, on right bank of DeVoe Lake Dam in Spotswood, 0.1 mi upstream from Cedar Brook, and 0.6 mi upstream from confluence with Matchaponix Brook.

DRAINAGE AREA.--40.7 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1957 to current year.

REVISED RECORDS.--WSP 1722: 1957-60.

GAGE.--Water-stage recorder above concrete dam. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Duhernal Water System). January 1957 to September 1966 at datum 17.72 ft higher.

REMARKS.--Water-discharge records good. Discharge given herein include flow over dam and through waste gates. Waste gates open Apr. 12, 13. Some regulation by Lake Manalapan, Helmetta Pond, and DeVoe Lake.

AVERAGE DISCHARGE.--26 years, 64.4 ft³/s, 21.49 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,650 ft³/s May 30, 1968, elevation, 19.90 ft, waste gates open; no flow part or all of some days in many years when gates were closed and water was below spillway.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 461 ft³/s Apr. 11, elevation, 18.78 ft; minimum daily, 8.2 ft³/s Oct. 6, 7, 11, 12, 18 and 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	17	47	25	49	55	99	72	116	34	23	41
2	12	17	56	25	47	76	83	71	75	30	18	38
3	11	16	46	24	53	121	90	64	60	27	17	31
4	11	17	36	23	63	103	134	73	70	24	17	28
5	9.2	22	32	24	53	77	138	78	81	23	17	27
6	8.2	22	29	40	46	62	115	67	64	23	19	27
7	8.2	19	29	44	43	59	102	61	53	22	19	26
8	8.6	17	28	34	44	76	93	58	48	21	17	24
9	9.3	17	24	28	44	108	104	56	43	18	17	23
10	8.3	17	23	30	43	129	123	54	39	17	17	22
11	8.2	6	23	129	40	147	290	52	38	14	19	21
12	8.2	17	24	126	36	161	365	51	36	15	74	20
13	8.8	58	23	64	34	178	120	49	33	20	94	29
14	10	68	21	47	36	145	93	48	31	19	44	27
15	10	40	23	81	39	93	82	47	29	20	29	24
16	9.4	29	40	182	39	66	139	88	27	18	25	22
17	8.7	25	76	105	42	51	350	189	27	16	19	20
18	8.2	23	49	61	47	49	286	122	27	14	19	19
19	8.2	21	36	43	58	77	137	69	29	14	21	17
20	8.5	21	34	38	66	139	188	62	31	16	19	17
21	12	21	35	35	70	123	199	72	72	14	17	23
22	14	20	30	34	74	156	139	97	134	17	17	90
23	13	21	28	42	85	184	100	150	73	22	17	66
24	11	20	29	96	103	142	119	146	47	24	17	36
25	16	19	29	97	108	105	262	85	36	27	19	28
26	45	19	27	67	89	83	260	63	30	24	19	26
27	43	17	27	55	69	72	138	132	28	20	19	24
28	27	18	27	50	59	103	103	137	27	18	19	22
29	21	53	26	46	---	151	90	89	48	15	67	20
30	18	74	27	43	---	146	79	93	47	16	81	28
31	17	---	26	45	---	118	---	190	---	33	41	---
TOTAL	424.0	781	1010	1783	1579	3355	4620	2685	1499	635	877	866
MEAN	13.7	26.0	32.6	57.5	56.4	108	154	86.6	50.0	20.5	28.3	28.9
MAX	45	74	76	182	108	184	365	190	134	34	94	90
MIN	8.2	16	21	23	34	49	79	47	27	14	17	17
CFSM	.34	.64	.80	1.41	1.39	2.65	3.78	2.13	1.23	.50	.70	.71
IN.	.39	.71	.92	1.63	1.44	3.07	4.22	2.45	1.37	.58	.80	.79

CAL YR 1982 TOTAL 16203.0 MEAN 44.4 MAX 327 MIN 8.2 CFSM 1.09 IN. 14.81
WTR YR 1983 TOTAL 20114.0 MEAN 55.1 MAX 365 MIN 8.2 CFSM 1.35 IN. 18.38

01405440 MANALAPAN BROOK AT BRIDGE STREET AT SPOTSWOOD, NJ

LOCATION.--Lat 40°23'26", long 74°23'26", Middlesex County, Hydrologic Unit 02030105, at bridge on Bridge Street in Spotswood, 150 ft downstream from Cedar Brook, and 400 ft below DeVoe Lake Dam.

DRAINAGE AREA.--43.9 mi².

WATER-QUALITY RECORDS

PERIOD OF RECORD.--February 1979 to current year.

COOPERATION.--Field data and samples for laboratory analyses supplied by New Jersey Department of Environmental Protection, Division of Water Resources. Analyses of fecal coliform and fecal streptococci by the MPN method and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)	HARD-NESS (MG/L AS CACO3)
JAN 17...	1100	160	4.6	1.0	13.8	<.6	940	>2400	34
MAR 15...	1410	144	4.5	9.5	10.2	E1.7	<20	7	31
MAY 17...	1100	122	3.7	13.5	10.3	E2.4	330	350	31
JUL 05...	1130	119	5.7	23.0	6.9	<1.1	<20	240	27
AUG 01...	1150	124	5.8	23.0	6.8	E2.2	330	920	30
SEP 21...	1215	136	6.0	20.5	8.0	E1.3	790	540	30

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFIDE TOTAL (MG/L AS S)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
JAN 17...	7.8	3.6	7.6	3.0	1.0	--	34	13	.20
MAR 15...	7.2	3.1	5.4	2.3	<1.0	--	37	10	.20
MAY 17...	7.2	3.2	6.4	1.9	<1.0	--	30	11	.10
JUL 05...	5.9	3.1	6.7	2.2	1.0	--	26	12	.20
AUG 01...	6.8	3.1	7.0	2.4	2.0	--	27	13	.10
SEP 21...	6.6	3.4	10	3.0	6.0	<.5	24	15	.10

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHATE, TOTAL (MG/L AS PO4)	CARBON, ORGANIC TOTAL (MG/L AS C)
JAN 17...	8.2	86	.010	.900	.210	.78	1.7	.34	3.1
MAR 15...	7.2	111	<.010	.900	.230	.80	1.7	.18	3.9
MAY 17...	5.6	65	<.010	.800	.200	.66	1.5	.21	--
JUL 05...	6.3	85	<.010	.700	520	E.85	--	.21	5.5
AUG 01...	4.3	73	.010	.800	.430	.71	1.5	.15	2.0
SEP 21...	2.9	73	<.010	.900	.150	.26	1.1	.18	3.5

01405440 MANALAPAN BROOK AT BRIDGE STREET AT SPOTSWOOD, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
SEP								
21...	1215	50	3	<10	40	<1	10	5

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
SEP								
21...	690	23	50	<.1	3	<1	100	1

01405500 SOUTH RIVER AT OLD BRIDGE, NJ

LOCATION.--Lat 40°24'22", long 74°22'08", Middlesex County, Hydrologic Unit 02030105, on right abutment of Duhernal Dam, 0.6 mi south of Old Bridge, 2.3 mi upstream from Deep Run, and 9.1 mi upstream from mouth.

DRAINAGE AREA.--94.6 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1939 to current year.

REVISED RECORDS.--WSP 1902: 1957. WDR NJ-82-1: 1975-80(P).

GAGE--Water-stage recorder above concrete dam. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records good. The flow past this station is affected by pumpage from well fields for industrial use by Duhernal Water System. Some regulation by Duhernal Lake, capacity, 138,000,000 gal, Lake Manalapan, DeVoe Lake, and several small ponds in headwater tributaries.

AVERAGE DISCHARGE.--44 years, 140 ft^3/s, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,250 ft^3/s Sept. 15, 1944, elevation, 11.71 ft, waste gates open; maximum gage height, 11.73 ft Aug. 28, 1971; no flow on days when waste gates were closed and water was below spillway.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 700 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Elevation (ft)	Date	Time	Discharge (ft^3/s)	Elevation (ft)
Mar. 13	0800	768	10.53	Apr. 4	1400	945	10.62
Mar. 20	0300	786	10.54	Apr. 11	1000	*1980	11.03
Mar. 22	1200	1190	10.73	Apr. 17	1400	1300	10.78
Mar. 29	0300	843	10.57	Apr. 25	1600	883	10.59

Minimum discharge, 25 ft^3/s Sept. 12, gage height, 9.56 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	34	31	126	48	93	146	190	185	289	96	83	99
2	31	30	165	47	80	379	176	178	210	78	52	80
3	30	29	132	45	111	408	411	167	177	70	44	58
4	28	29	89	43	130	210	838	193	229	62	40	47
5	28	37	70	43	92	165	376	207	226	58	39	41
6	27	47	64	91	70	143	239	175	176	58	59	38
7	27	41	68	118	73	194	205	160	147	56	51	35
8	27	34	58	82	105	334	216	152	126	52	44	32
9	27	31	50	61	96	536	345	148	109	50	39	29
10	26	30	47	59	74	467	587	140	96	47	35	27
11	26	29	44	257	66	561	1690	131	91	45	38	27
12	26	30	48	264	52	544	815	128	85	44	156	27
13	26	115	47	143	56	667	323	124	78	43	235	47
14	29	213	43	99	66	284	248	120	72	41	110	53
15	31	110	43	181	72	203	220	118	67	40	66	40
16	30	64	75	498	80	177	429	230	61	41	51	34
17	28	51	198	288	108	157	1120	528	59	41	44	32
18	27	44	131	170	159	188	630	318	59	39	41	30
19	27	40	85	118	220	579	383	199	61	39	39	29
20	27	38	75	88	213	637	550	186	68	42	41	27
21	30	37	76	74	202	502	506	214	187	45	35	32
22	39	36	65	67	237	1050	319	280	310	57	31	223
23	37	36	57	109	284	472	251	402	167	59	28	206
24	32	34	55	296	357	246	370	381	112	58	29	91
25	35	33	56	186	253	202	810	231	84	66	29	57
26	123	33	53	130	192	179	612	193	69	60	29	47
27	150	32	51	108	158	186	311	400	61	50	28	44
28	71	33	50	91	143	574	251	356	74	45	27	42
29	45	110	49	79	---	677	225	235	147	41	98	40
30	36	204	52	72	---	289	199	289	139	46	263	56
31	33	---	50	88	---	217	---	487	---	108	111	---
TOTAL	1193	1661	2272	4043	3842	11573	13845	7255	3836	1677	2015	1670
MEAN	38.5	55.4	73.3	130	137	373	462	234	128	54.1	65.0	55.7
MAX	150	213	198	498	357	1050	1690	528	310	108	263	223
MIN	26	29	43	43	52	143	176	118	59	39	27	27

CAL YR 1982 TOTAL 38198 MEAN 105 MAX 1010 MIN 21
WTR YR 1983 TOTAL 54882 MEAN 150 MAX 1690 MIN 26

01405700 SOUTH RIVER BELOW DUHERNAL DAM AT OLD BRIDGE, NJ

LOCATION.--Lat 40°25'00", long 74°21'43", Middlesex County, Hydrologic Unit 02030105, at bridge on Old Bridge-South Amboy Road in Old Bridge, 0.5 mi upstream of Deep Run, and 7.4 mi upstream from mouth.

DRAINAGE AREA.--95.9 mi².

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976-77, January 1979 to current year.

COOPERATION.--Field data and samples for laboratory analyses supplied by New Jersey Department of Environmental Protection, Division of Water Resources. Analyses of fecal coliform and fecal streptococci by the MPN method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	COLI- FORM, FECAL, EC BROTH (MPN)	STREP- TOCOCCI FECAL (MPN)	HARD- NESS (MG/L AS CACO3)
JAN									
17...	1130	170	5.1	1.0	14.3	E1.4	50	540	35
MAR									
15...	1230	165	4.8	10.5	11.8	E1.3	50	5	38
MAY									
17...	0945	148	5.0	13.5	9.2	E2.3	20	70	35
JUL									
05...	1045	182	6.0	25.0	6.3	<.9	80	920	40

DATE	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (MG/L AS CACO3)	SULFIDE TOTAL (MG/L AS S)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
JAN									
17...	8.7	3.3	9.9	3.0	1.0	--	33	15	.20
MAR									
15...	9.8	3.3	9.5	2.7	1.0	--	43	14	.20
MAY									
17...	9.0	3.1	11	2.4	1.0	<.5	34	14	.10
JUL									
05...	9.7	3.9	17	4.4	2.0	--	34	23	.20

DATE	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHATE, TOTAL (MG/L AS PO4)	CARBON, ORGANIC TOTAL (MG/L AS C)
JAN									
17...	7.5	84	.010	.900	.380	.77	1.7	.37	3.4
MAR									
15...	7.3	111	<.010	.900	.460	.87	1.8	.12	3.0
MAY									
17...	4.5	94	.010	.800	.730	1.1	1.9	.27	3.8
JUL									
05...	8.1	126	.010	1.30	.610	E.98	--	--	5.0

RESERVOIRS IN RARITAN RIVER BASIN

01396790 SPRUCE RUN RESERVOIR.--Lat 40°38'30", long 74°55'19", Hunterdon County, Hydrologic Unit 02030105, at dam on Spruce Run, 0.5 mi north of Clinton, and 0.6 mi upstream from mouth. DRAINAGE AREA, 41.3 mi^2. PERIOD OF RECORD, November 1963 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

Reservoir is formed by earthfill dam with concrete spillway; dam completed in October 1963 with crest of spillway at elevation 273.00 ft. Usable capacity, 11,000,000,000 gal. Dead storage 300,000 gal. Reservoir used for water supply and recreation. Outflow mostly regulated by gates. Water is released to maintain minimum flow on the South Branch Raritan River and, at times, for municipal supply. Records given herein represent usable capacity. Records furnished by New Jersey Water Supply Authority.

EXTREMES FOR PERIOD OF RECORD: Maximum contents observed, 11,400,000,000 gal Jan. 24, 1979, elevation, 274.72 ft; minimum observed, 4,600,000,000 gal Feb. 1, 1981, elevation, 253.58 ft.

EXTREMES FOR CURRENT YEAR: Maximum contents, 11,200,000,000 gal Apr. 17, elevation, 273.47 ft; minimum observed, 3,800,000,000 gal Sept. 30, elevation, 250.01 ft.

01397050 ROUND VALLEY RESERVOIR.--Lat 40°36'39", long 74°50'42", Hunterdon County, Hydrologic Unit 02030105, at main dam on Prescott Brook, 1.8 mi south of Lebanon, 3.2 mi upstream from mouth, and 4.5 mi west of Whitehouse. DRAINAGE AREA, 5.7 mi^2. PERIOD OF RECORD, March 1966 to current year. Nonrecording gage read daily. Datum of gage is National Geodetic Vertical Datum of 1929.

Reservoir is formed by earthfill dam at main dam on Prescott Brook and two dams on South Branch Rockaway River at Lebanon; storage began in March 1966. Capacity at spillway level, 55,000,000,000 gal, elevation, 385.00 ft. Reservoir is used primarily for storage and is filled by pumping from South Branch Raritan River at Hamden Pumping Station (see following page). Outflow is controlled by operation of gates in pipe in dams. Water is released into South Branch Rockaway Creek and Prescott Brook. Records furnished by New Jersey Water Supply Authority.

EXTREMES FOR PERIOD OF RECORD: Maximum contents observed, 55,400,000,000 gal June 15, 1975, elevation, 385.63 ft; minimum observed (after first filling), 37,100,000,000 gal Feb. 9, 1981, elevation, 361.30 ft.

EXTREMES FOR CURRENT YEAR: Maximum contents observed, 41,100,000,000 gal June 21, elevation, 366.71 ft; minimum observed, 37,000,000,000 gal Nov. 28, elevation, 361.05 ft.

MONTHEND ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

Date	Elevation* (feet)	Contents (million gallons)	Change in contents (equivalent in ft^3/s)	Elevation* (feet)	Contents (million gallons)	Change in contents (equivalent in ft^3/s)
	01396790	SPRUCE RUN RESERVOIR		013970500	ROUND VALLEY RESERVOIR	
Sept. 30	271.34	10,200	-	364.72	39,700	-
Oct. 31	271.19	10,200	0	361.51	37,300	-119.8
Nov. 30	270.64	9,900	-15.5	361.14	37,000	-15.5
Dec. 31	271.64	10,300	+20.0	361.35	37,200	+10.0
CAL YR 1982	-	-	+3.0	-	-	+21.6
Jan. 31	272.67	10,800	+25.0	361.40	37,200	0
Feb. 29	272.45	10,800	0	361.65	37,400	+11.0
Mar. 31	272.99	11,000	+10.0	363.43	38,800	+69.9
Apr. 30	273.11	11,000	0	365.96	40,600	+92.8
May 31	273.17	11,100	0	366.63	41,000	+20.0
June 30	272.98	11,000	0	366.69	41,100	+5.2
July 31	267.49	8,800	-109.8	366.38	40,900	-10.0
Aug. 31	260.57	6,500	-114.8	366.25	40,800	-5.0
Sept. 30	250.01	3,800	-139.2	366.03	40,600	-10.3
WTR YR 1983	-	-	-27.1	-	-	+3.8

* Elevation at 0800 on first day of following month.

DIVERSIONS IN RARITAN RIVER BASIN

01396920 Water is diverted 4.0 mi upstream from the gaging station on South Branch Raritan River at Stanton (see sta 01397000), at the Hamden Pumping Station, for storage in Round Valley Reservoir. Records furnished by New Jersey Water Supply Authority.

01400490 Johns-Manville Products Corporation diverts water 1,500 ft upstream from the gaging station on Raritan River at Manville (sta 01400500) for industrial processes and cooling purposes. The effluent is then mixed with that from the Borough of Manville sewage treatment plant and discharged into the Raritan River 600 ft downstream from the Millstone River. Records furnished by the Johns-Manville Products Corporation.

01400509 Elizabethtown Water Company diverts water from the Raritan and Millstone Rivers just upstream from the mouth of the Millstone River. Records given herein represent the total diversion from both rivers. Records furnished by the Elizabethtown Water Company.

01400836 Water is diverted from Carnegie Lake (Millstone River) to the Delaware and Raritan Canal at the aqueduct 2.3 mi upstream from the gaging station on the Delaware and Raritan Canal (sta 01460500). Records furnished by New Jersey Water Supply Authority.

01402910 Water is diverted from the Raritan River just below the Millstone River to the Delaware and Raritan Canal at Ten Mile Lock for municipal supply. Records furnished by the New Jersey Water Supply Authority.

DIVERSIONS, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

Month	HAMDEN PUMPING STATION 01396920	JOHNS-MANVILLE PRODUCTS CORPORATION 01400490	ELIZABETHTOWN WATER COMPANY 01400509	CARNEGIE LAKE 01400836	TEN MILE LOCK DIVERSION 01402910
October.........	0	2.7	144	0	9.2
November........	0	2.3	141	0	0
December........	0	2.2	119	0	0
CAL YR 1982...	0	2.6	142	19.5	18.3
January.........	0	2.3	130	0	0
February........	0	2.6	130	0	0
March...........	34.6	2.0	124	0	0
April...........	41.6	2.6	118	0	0
May.............	0	2.0	134	0	0
June............	0	3.0	148	16.4	0
July............	0	2.9	164	1.7	58.5
August..........	0	2.8	164	3.2	46.2
September.......	0	2.6	162	0	37.1
WTR YR 1983...	6.4	2.5	140	1.8	13.0

01407253 WILLOW BROOK NEAR HOLMDEL, NJ

LOCATION.--Lat 40°19'47", long 74°10'26", Monmouth County, Hydrologic Unit 02030104, at bridge on Willow Brook Road, 0.6 mi upstream of Big Brook, 1.2 mi southeast of Holmdel, 1.3 mi northeast of Vanderburg, and 1.6 mi northwest of Sugar Loaf Hill.

DRAINAGE AREA.--7.52 mi².

WATER-QUALITY RECORDS

PEIOD OF RECORD.--Water years 1976 to July 1983 (discontinued).

COOPERATION.--Field data and samples for laboratory analyses supplied by New Jersey Department of Environmental Protection, Division of Water Resources. Analyses of fecal coliform and fecal streptococci by the MPN method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, FECAL, EC BROTH (MPN)	STREPTOCOCCI FECAL (MPN)	HARDNESS (MG/L AS CACO3)
FEB 03...	1250	195	6.8	9.0	10.0	E1.9	1300	540	59
APR 06...	1120	207	7.2	8.0	11.2	<1.1	130	8	69
MAY 26...	1130	210	7.1	15.0	10.4	<.9	1700	350	71
JUL 12...	1045	244	--	17.0	9.6	<.9	2400	540	90

DATE	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)
FEB 03...	19	2.8	10	2.6	24	30	18	.10	6.8
APR 06...	21	3.9	10	2.5	18	38	23	.20	9.5
MAY 26...	22	4.0	9.8	2.0	26	34	21	.20	11
JUL 12...	29	4.2	10	2.6	40	36	25	.40	13

DATE	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHATE, TOTAL (MG/L AS PO4)	CARBON, ORGANIC TOTAL (MG/L AS C)
FEB 03...	112	.030	.600	.190	.88	1.5	1.30	3.3
APR 06...	143	.010	1.10	.230	.54	1.6	.39	2.9
MAY 26...	141	<.010	.900	.120	.61	1.5	.36	--
JUL 12...	167	.010	.800	<.050	.26	1.1	.98	3.0

01407400 YELLOW BROOK AT COLTS NECK, NJ

LOCATION.--Lat 40°17'47", long 74°10'16", Monmouth County, Hydrologic Unit 02030104, at bridge on Creamery Road in Colts Neck, and 0.3 mi upstream from Mine Brook.

DRAINAGE AREA.--9.71 mi².

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976 to July 1983 (discontinued).

COOPERATION.--Field data and samples for laboratory analyses supplied by New Jersey Department of Environmental Protection, Division of Water Resources. Analyses of fecal coliform and fecal streptococci by the MPN method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, FECAL, EC BROTH (MPN)	STREPTOCOCCI FECAL (MPN)	HARDNESS (MG/L AS CACO3)
FEB									
03...	1140	134	6.8	9.0	9.8	2.9	490	49	34
APR									
06...	1040	130	6.6	9.0	11.7	<1.1	16000	33	38
MAY									
26...	1030	134	6.9	15.0	10.0	E1.5	490	350	42
JUL									
12...	1000	139	6.8	18.5	8.3	E1.5	40	920	46

DATE	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)
FEB									
03...	8.8	2.8	11	1.6	13	14	17	<.10	11
APR									
06...	10	3.2	6.4	1.6	12	19	15	.20	12
MAY									
26...	11	3.6	6.5	1.4	18	15	15	.20	13
JUL									
12...	12	3.9	8.4	1.9	25	12	17	.20	13

DATE	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHATE, TOTAL (MG/L AS PO4)	CARBON, ORGANIC TOTAL (MG/L AS C)
FEB								
03...	84	.010	.790	.160	1.3	2.1	2.26	4.5
APR								
06...	95	.010	1.50	.180	.45	2.0	.27	2.5
MAY								
26...	97	<.010	1.30	.170	.49	1.8	.21	2.5
JUL								
12...	100	.020	1.20	.070	.21	1.4	--	2.4

01407500 SWIMMING RIVER NEAR RED BANK, NJ

LOCATION.--Lat 40°19'10", long 74°06'55", Monmouth County, Hydrologic Unit 02030104, on left bank 50 ft upstream from spillway at Swimming River Reservoir, 3.3 mi southwest of Red Bank, and 4.8 mi upstream from mouth. Water-quality samples collected at bridge on Swimming River Road, 800 ft downstream from gaging station.

DRAINAGE AREA.--49.2 mi^2 (revised).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1922 to current year.

REVISED RECORDS.--WSP 781. Drainage area. WSP 891: 1939.

GAGE.--Water-stage recorder above concrete dam. Datum of gage is 30.00 ft National Geodetic Vertical Datum of 1929. Prior to Jan. 19, 1962, at site 800 ft upstream at datum 17.67 ft lower. Jan. 19 to Mar. 30, 1962, nonrecording gage, 700 ft upstream at datum 13.87 ft lower.

REMARKS.--Water-discharge records fair. Records given herein represent flow over spillway and flow or leakage through blowoff gates (no gate opening this year). Diversion above station for municipal supply. Flow regulated by Swimming River Reservoir.

COOPERATION.--Water-stage recorder inspected by and record of diversion furnished by Monmouth Consolidated Water Co.

AVERAGE DISCHARGE.--61 years, 80.1 ft^3/s, 22.43 in/yr, adjusted for storage and diversion.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,910 ft^3/s Oct. 27, 1943, gage height, 8.96 ft, site and datum then in use, from rating curve extended above 1,000 ft^3/s on basis of weir formula; no flow some days in many years.

EXTREMES OUTSIDE PERIOD OF RECORD.--A flood in July 1919 reached a stage of 7.84 ft (site and datum then in use), from floodmark, discharge about 11,800 ft^3/s.

EXTREMES OF CURRENT YEAR.--Maximum discharge, 1,540 ft^3/s Apr. 10, gage height, 6.12 ft; no flow many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	15	33	26	68	68	12	.00	.00
2	.00	.00	.00	.00	14	174	23	65	56	8.5	.00	.00
3	.00	.00	.00	.00	30	61	349	66	49	4.9	.00	.00
4	.00	.00	.00	.00	34	26	426	98	91	2.6	.00	.00
5	.00	.00	.00	.00	24	22	164	80	65	2.5	.00	.0
6	.00	.00	.00	.00	14	20	72	62	48	5.4	.00	.00
7	.00	.00	.00	.00	54	84	40	56	44	4.1	.00	.00
8	.00	.00	.00	.00	82	137	46	54	39	2.5	.00	.00
9	.00	.00	.00	.00	48	167	57	57	32	1.3	.00	.00
10	.00	.00	.00	.00	29	161	599	49	31	.41	.00	.00
11	.00	.00	.00	.00	29	169	656	49	28	.08	.00	.00
12	.00	.00	.00	.00	44	384	133	49	20	.00	.00	.00
13	.00	.00	.00	.00	34	221	69	47	16	.00	.00	.00
14	.00	.00	.00	.00	29	98	60	42	12	.00	.00	.00
15	.00	.00	.00	.92	22	48	64	43	8.3	.00	.00	.00
16	.00	.00	.00	19	20	41	362	154	5.8	.00	.00	.00
17	.00	.00	.00	26	22	45	470	224	4.2	.00	.00	.00
18	.00	.00	.00	23	37	66	120	84	.00	.00	.00	.00
19	.00	.00	.00	18	48	441	189	63	3.6	.00	.00	.00
20	.00	.00	.00	14	47	267	229	72	4.1	.00	.00	.00
21	.00	.00	.00	10	46	158	152	79	46	.00	.00	.00
22	.00	.00	.00	7.3	51	188	93	111	51	.00	.00	.00
23	.00	.00	.00	16	84	69	78	152	30	.00	.00	.00
24	.00	.00	.00	71	112	18	364	105	19	.00	.00	.00
25	.00	.00	.00	50	71	18	313	71	14	.00	.00	.00
26	.00	.00	.00	34	54	16	137	62	9.0	.00	.00	.00
27	.00	.00	.00	22	39	20	90	107	6.5	.00	.00	.00
28	.00	.00	.00	18	30	346	78	82	4.7	.00	.00	.00
29	.00	.00	.00	15	---	184	68	67	19	.00	.00	.00
30	.00	.00	.00	13	---	70	69	79	17	.00	.00	.00
31	.00	---	.00	15	---	35	---	93	---	.00	.00	---
TOTAL	.00	.00	.00	372.22	1163	3787	5596	2490	845.0	44.29	.00	.00
MEAN	.00	.00	.00	12.0	41.5	122	187	80.3	28.2	1.43	.00	.00
MAX	.00	.00	.00	71	112	441	656	224	91	12	.00	.00
MIN	.00	.00	.00	.00	14	16	23	42	3.6	.00	.00	.00
(†)	31.5	38.2	43.7	54.7	37.8	36.1	37.0	39.5	42.4	29.3	37.4	30.9
MEAN‡	31.5	38.2	43.7	66.7	79.3	158	224	120	70.6	30.7	37.4	30.9
CFSM‡	0.65	0.79	0.90	1.38	1.64	3.26	4.62	2.47	1.46	0.63	0.77	0.64
IN‡	0.75	0.88	1.04	1.59	1.70	3.76	5.15	2.85	1.63	0.73	0.89	0.71

CAL YR 1982 TOTAL 7699.02 MEAN 21.1 MAX 372 MIN .00 MEAN‡ 57.6 CFSM‡ 1.19 IN‡ 16.11
WTR YR 1983 TOTAL 14297.51 MEAN 39.2 MAX 656 MIN .00 MEAN‡ 77.8 CFSM‡ 1.60 IN‡ 21.77

† Diversion and change in contents in Swimming River Reservoir, in cubic feet per second.
‡ Adjusted for diversion and change in contents.

01407705 SHARK RIVER NEAR NEPTUNE CITY, NJ

LOCATION.--Lat 40°11'56", long 74°04'14", Monmouth County, Hydrologic Unit 02030104, on left bank 100 ft upstream from bridge on Remsen Mill Road, 0.3 mi downstream from Robins Swamp Brook, and 1.7 mi west of Neptune City.

DRAINAGE AREA.--9.96 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1966 to current year.

GAGE.--Water-stage recorder, crest-stage gage, and concrete control. Datum of gage is 7.05 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records fair. Diversion above station by Monmouth Consolidated Water Co. for municipal supply and by farmers for irrigation.

COOPERATION.--Water-stage recorder inspected by Monmouth Consolidated Water Co.

AVERAGE DISCHARGE.--17 years, 14.4 ft³/s, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 580 ft³/s Dec. 26, 1969, gage height, 7.94 ft; no flow many days during 1978, 1980, 1981, and 1982.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 235 ft³/s Apr. 10, gage height, 5.04 ft; no flow part of Aug. 12, 16, 17, 24, 25, Sept. 11, 20, 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.2	2.7	8.4	4.6	9.4	19	16	16	22	4.8	16	8.6
2	4.3	4.5	11	4.2	13	47	14	14	14	4.9	8.3	3.7
3	6.1	3.2	4.1	2.9	22	23	91	14	11	4.3	2.1	8.9
4	6.3	2.5	2.2	2.6	16	16	46	21	19	3.5	1.8	7.1
5	6.2	2.5	1.7	3.1	13	13	24	16	13	9.9	3.5	5.8
6	6.2	2.7	3.0	12	12	11	18	13	9.6	6.6	2.0	2.6
7	6.3	3.3	1.9	7.8	85	51	17	12	8.4	3.7	1.6	1.2
8	6.5	3.2	1.3	11	40	78	20	11	7.6	3.0	2.2	.94
9	7.3	3.1	1.4	10	24	83	29	11	6.9	2.3	1.4	1.1
10	6.6	2.9	1.8	14	18	78	133	11	6.1	2.2	1.2	.87
11	6.5	2.8	2.1	41	14	59	128	9.9	6.1	2.3	12	.65
12	6.5	8.8	3.3	11	17	109	38	9.0	6.9	2.0	15	1.9
13	6.5	29	3.9	7.4	15	45	28	9.5	7.6	1.8	2.9	5.6
14	7.3	18	3.5	7.7	15	29	27	9.1	3.9	1.7	1.5	1.8
15	6.5	11	5.3	55	15	25	25	11	3.5	1.7	1.1	1.5
16	6.4	7.2	120	29	17	22	106	44	4.2	4.8	.65	1.4
17	6.3	4.2	16	19	20	22	117	43	7.4	7.2	4.5	1.3
18	6.5	3.6	9.8	15	26	54	42	22	8.6	7.2	7.3	1.3
19	6.8	3.4	6.4	12	27	122	65	15	9.2	4.0	3.4	.98
20	6.7	3.1	6.8	10	24	42	69	16	13	2.1	1.2	.87
21	4.3	3.1	6.2	9.2	23	59	41	18	68	2.7	.84	1.8
22	1.4	3.3	5.6	8.2	25	50	30	27	25	7.8	.71	27
23	1.3	4.3	5.1	30	35	28	27	41	15	1.8	.75	3.7
24	5.0	4.1	4.6	27	30	24	99	29	8.8	5.2	.76	2.0
25	33	3.1	4.3	19	23	21	78	23	5.0	4.2	4.4	1.8
26	56	3.2	4.3	13	19	19	34	19	1.5	6.7	6.7	1.9
27	3.4	3.1	4.6	7.6	17	29	26	24	4.2	1.3	7.9	1.6
28	2.5	4.2	5.1	6.7	16	123	22	20	13	.96	8.4	1.4
29	2.3	32	5.0	6.2	---	35	19	24	24	.82	31	1.4
30	2.4	6.0	4.8	7.4	---	22	19	36	4.7	.93	9.8	18
31	2.4	---	4.1	11	---	18	---	41	---	1.7	31	---
TOTAL	238.0	188.1	267.6	424.6	630.4	1376	1448	629.5	360.1	108.91	191.91	118.71
MEAN	7.68	6.27	8.63	13.7	22.5	44.4	48.3	20.3	12.0	3.51	6.19	3.96
MAX	56	32	120	55	85	123	133	44	68	9.9	31	27
MIN	1.3	2.5	1.3	2.6	9.4	11	14	9.0	3.5	.82	.65	.65

CAL YR 1982 TOTAL 3320.3 MEAN 9.10 MAX 120 MIN 1.2
WTR YR 1983 TOTAL 5981.83 MEAN 16.4 MAX 133 MIN .65

01407705 SHARK RIVER NEAR NEPTUNE CITY, NJ--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976 to current year.

COOPERATION.--Field data and samples for laboratory analyses supplied by New Jersey Department of Environmental Protection, Division of Water Resources. Analyses of fecal coliform and fecal streptococci by the MPN method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)	HARD-NESS (MG/L AS CACO3)
JAN 19...	1200	13	162	6.4	.0	15.0	<.2	<20	33	39
MAR 23...	1130	28	122	5.9	5.0	12.5	E2.0	50	9	27
MAY 18...	1150	22	122	6.5	10.5	11.8	E.6	50	22	31
JUL 12...	1230	2.2	152	--	17.5	9.4	E1.5	130	350	45
AUG 03...	1240	2.1	148	6.7	21.5	8.8	E1.7	170	240	39
SEP 22...	1130	22	126	6.6	17.0	8.8	2.4	3500	>2400	32

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFIDE TOTAL (MG/L AS S)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
JAN 19...	12	2.2	10	2.6	11	--	25	15	.20
MAR 23...	8.0	1.7	9.1	2.7	5.0	--	23	14	<.10
MAY 18...	9.3	1.9	10	2.6	8.0	<.5	21	15	.10
JUL 12...	15	1.9	9.8	2.3	21	--	20	17	.20
AUG 03...	13	1.7	9.0	2.4	20	--	20	16	<.10
SEP 22...	9.9	1.7	9.0	2.0	9.0	--	24	15	.10

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DOTAL SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHATE, TOTAL (MG/L AS PO4)	CARBON, ORGANIC TOTAL (MG/L AS C)
JAN 19...	13	86	<.010	.400	.120	.29	.69	.21	3.3
MAR 23...	8.2	98	<.010	.570	.200	.80	1.4	.15	5.4
MAY 18...	9.3	80	<.010	.500	.340	.66	1.1	--	7.1
JUL 12...	13	105	.020	.300	.090	.28	.58	.31	--
AUG 03...	12	99	.020	.600	.240	.58	1.1	.15	3.5
SEP 22...	8.4	86	.010	.200	.060	.77	.97	.55	10

01407705 SHARK RIVER NEAR NEPTUNE CITY, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYL-LIUM, TOTAL RECOV-ERABLE (UG/L AS BE)	BORON, TOTAL RECOV-ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)
MAY								
18...	1150	150	1	<10	40	1	<10	4

DATE	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	SELE-NIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
MAY								
18...	1800	9	40	<.1	10	<1	50	<1

01407760 JUMPING BROOK NEAR NEPTUNE CITY, NJ

LOCATION.--Lat 40°12'13", long 74°03'58", Monmouth County, Hydrologic Unit 02030104, on left bank 50 ft downstream from dam on Jumping Brook Reservoir, 0.85 mi upstream from mouth, and 1.4 mi west of Neptune City. Water quality samples collected at bridge 600 ft downstream from gage at high flows.

DRAINAGE AREA.--6.43 mi^2.

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976 to current year.

COOPERATION.--Field data and samples for laboratory analyses supplied by New Jersey Department of Environmental Protection, Division of Water Resources. Analyses of fecal coliform and fecal streptococci by the MPN method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, FECAL, EC BROTH (MPN)	STREPTOCOCCI FECAL (MPN)	HARDNESS (MG/L AS CACO3)
JAN										
19...	1230	E6.0	184	5.2	.5	14.0	<.2	<20	6	31
MAR										
23...	1030	11	146	4.9	5.5	13.0	2.6	<20	13	26
MAY										
18...	1250	8.6	122	6.0	13.0	11.5	E1.5	130	79	27
JUL										
12...	1330	1.4	153	6.3	20.5	8.1	<1.1	50	130	36
AUG										
03...	1340	2.3	142	6.0	24.0	9.0	E1.8	70	1600	33
SEP										
22...	1230	13	129	--	18.0	10.0	E2.0	1100	>2400	25

DATE	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	SULFIDE TOTAL (MG/L AS S)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)
JAN									
19...	8.6	2.4	18	2.0	1.0	--	28	29	<.10
MAR									
23...	7.5	1.8	10	1.7	1.0	--	26	17	<.10
MAY									
18...	7.9	1.8	12	1.6	3.0	--	25	17	<.10
JUL									
12...	10	2.6	11	2.7	5.0	--	28	22	.10
AUG									
03...	9.5	2.3	9.4	2.6	4.0	--	28	17	<.10
SEP									
22...	6.9	1.8	9.2	2.0	6.0	<.5	22	14	<.10

DATE	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHATE, TOTAL (MG/L AS PO4)	CARBON, ORGANIC TOTAL (MG/L AS C)
JAN									
19...	9.0	92	--	.400	.180	.50	.90	--	4.2
MAR									
23...	5.3	92	<.010	.300	.200	.72	1.0	.06	6.8
MAY									
18...	5.5	90	<.010	.400	.140	.42	.82	.12	9.1
JUL									
12...	9.1	104	.010	.300	.180	.55	.85	.21	4.6
AUG									
03...	8.4	91	.010	.400	.190	E.45	--	.28	4.3
SEP									
22...	5.0	76	<.010	.300	.090	.60	.90	.24	6.3

01407760 JUMPING BROOK NEAR NEPTUNE CITY, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
SEP								
22...	1230	110	3	<10	30	<1	20	3

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
SEP								
22...	1300	13	40	<.1	1	<1	130	21

01407830 MANASQUAN RIVER NEAR GEORGIA, NJ

LOCATION.--Lat 40°12'36", long 74°16'41", Monmouth County, Hydrologic Unit 02040301, at bridge on Jacksons Mill Road, 0.5 mi upstream from Debois Creek, 0.9 mi southwest of intersection of Jacksons Mill Road with State Route 524, 1.3 mi southwest of Adelphia, and 1.6 mi north of Georgia.

DRAINAGE AREA.--10.6 mi².

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1970-74, 1976 to July 1983 (discontinued).

COOPERATION.--Field data and samples for laboratory analyses supplied by New Jersey Department of Environmental Protection, Division of Water Resources. Analyses of fecal coliform and fecal streptococci by the MPN method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)	HARD-NESS (MG/L AS CACO3)
JAN									
19...	0940	244	6.6	1.0	12.8	5.6	16000	>2400	55
MAR									
23...	1330	175	6.4	8.5	10.8	5.0	210	170	46
MAY									
18...	0945	164	6.4	10.0	11.0	E2.0	80	49	41
JUL									
14...	1030	238	7.2	19.0	7.1	3.0	170	350	59

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)
JAN									
19...	15	4.3	14	4.4	9.0	38	21	.30	24
MAR									
23...	12	3.9	9.5	3.5	7.0	32	17	.20	15
MAY									
18...	11	3.3	11	3.6	6.0	29	15	.20	18
JUL									
14...	17	4.1	17	4.7	22	28	23	.40	25

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHATE, TOTAL (MG/L AS PO4)	CARBON, ORGANIC TOTAL (MG/L AS C)
JAN								
19...	129	.020	1.60	1.40	E1.9	--	1.10	4.4
MAR								
23...	122	.030	1.90	1.00	1.8	3.7	.76	3.0
MAY								
18...	105	.020	1.00	1.70	1.8	2.8	.94	6.0
JUL								
14...	155	.130	.640	3.00	E3.4	--	1.38	4.9

01407997 MARSH BOG BROOK AT SQUANKUM, NJ

LOCATION.--Lat 40°10'01", long 74°09'33", Monmouth County, Hydrologic Unit 02040301, at bridge on Squankum-Yellow Brook Road in Squankum, and 0.2 mi upstream from mouth.

DRAINAGE AREA.--4.91 mi².

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1971-74, 1976 to current year.

COOPERATION.--Field data and samples for laboratory analyses supplied by New Jersey Department of Environmental Protection, Division of Water Resources. Analyses of fecal coliform and fecal streptococci by the MPN method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, FECAL, EC BROTH (MPN)	STREPTOCOCCI FECAL (MPN)	HARDNESS (MG/L AS CACO3)
JAN										
19...	1040	5.7	208	6.2	.0	15.0	E1.9	490	130	36
MAR										
23...	1245	19	94	4.9	5.0	12.0	E2.3	<20	27	19
MAY										
18...	1050	12	107	5.6	10.5	11.4	E1.6	5400	23	20
JUL										
14...	1130	--	269	7.3	20.0	6.2	E1.3	3500	280	69
AUG										
03...	1120	--	408	6.9	22.0	5.7	>7.6	>24000	>2400	71

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNESIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTASSIUM, DIS-SOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	SULFIDE TOTAL (MG/L AS S)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLORIDE, DIS-SOLVED (MG/L AS CL)	FLUORIDE, DIS-SOLVED (MG/L AS F)
JAN									
19...	11	2.1	20	3.3	6.0	--	30	29	.10
MAR									
23...	5.6	1.3	5.8	1.9	1.0	--	21	10	<.10
MAY									
18...	6.0	1.3	10	2.1	3.0	<.5	21	14	<.10
JUL									
14...	23	2.8	16	5.8	32	--	23	27	.20
AUG									
03...	24	2.8	40	7.5	67	--	23	68	.20

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHATE, TOTAL (MG/L AS PO4)	CARBON, ORGANIC TOTAL (MG/L AS C)
JAN									
19...	11	115	.010	.200	.830	1.6	1.8	.49	5.5
MAR									
23...	7.3	80	<.010	.200	.230	.78	.98	.09	5.4
MAY									
18...	9.1	70	<.010	.200	.520	1.1	1.4	.58	9.2
JUL									
14...	15	178	.090	.500	E4.00	E4.1	--	.55	8.1
AUG									
03...	13	232	.030	.200	4.20	E4.4	--	1.53	7.7

01407997 MARSH BOG BROOK AT SQUANKUM, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
MAY								
18...	1050	130	1	<10	30	1	10	4

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
MAY								
18...	4200	8	30	<.1	3	<1	80	<1

01408000 MANASQUAN RIVER AT SQUANKUM, NJ

LOCATION.--Lat 40°09'47", Long 74°09'21", Monmouth County, Hydrologic Unit 02040301, on right bank 20 ft downstream from bridge on State Highway 547 (Squankum Park Road) in Squankum, and 0.4 mi downstream from Marsh Bog Brook.

DRAINAGE AREA.--44.0 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1931 to current year. Monthly discharge only for July 1931, published in WSP 1302.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 18.82 ft National Geodetic Vertical Datum of 1929. Prior to Aug. 13, 1940, water-stage recorder at site 80 ft upstream at same datum.

REMARKS.--Water-discharge records fair. Occasional regulation from unknown source.

AVERAGE DISCHARGE.--52 years, 75.1 ft³/s, 23.50 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,940 ft³/s Sept. 21, 1938, gage height, 12.45 ft, from floodmark, site then in use, from rating curve extended above 900 ft³/s on basis of contracted-opening measurement of peak flow; minimum, 8.1 ft³/s Aug. 6, 1981.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 600 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Mar. 28	1045	670	5.93	Apr. 17	0015	814	6.54
Apr. 3	2130	764	6.34	Apr. 24	1945	619	5.69
Apr. 11	0300	*1210	7.91				

Minimum discharge, 0.26 ft³/s Sept. 9, gage height, 2.01 ft, temporary pumping of gage pool.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35	28	77	38	54	76	100	103	98	55	49	68
2	33	29	53	36	51	213	91	98	84	49	38	64
3	32	27	47	36	78	115	414	94	71	47	34	53
4	31	28	43	36	63	89	248	128	127	44	33	48
5	30	36	43	37	52	78	139	105	93	41	31	45
6	29	37	46	59	49	71	117	92	81	47	30	38
7	29	35	40	47	109	166	105	85	66	45	29	34
8	28	31	39	41	93	215	115	82	61	39	28	28
9	29	29	36	39	69	223	138	82	59	37	27	17
10	28	29	36	43	59	215	476	77	56	36	27	28
11	29	28	38	182	49	184	657	75	54	35	36	27
12	28	28	37	79	53	361	207	73	53	34	82	28
13	28	91	36	59	56	168	150	72	50	34	63	54
14	29	112	37	51	52	122	128	69	49	33	52	33
15	29	79	44	135	54	105	117	68	47	31	40	31
16	29	60	148	124	58	92	359	152	46	33	35	30
17	29	46	71	75	65	87	463	194	45	31	32	30
18	28	36	54	60	88	149	189	102	45	30	31	29
19	28	32	50	52	98	416	227	85	51	31	32	29
20	28	32	55	55	86	169	271	88	47	31	30	29
21	34	32	47	46	86	234	204	96	158	33	28	29
22	30	32	44	45	102	216	147	196	163	76	27	134
23	28	32	43	77	131	128	127	209	79	33	26	42
24	30	31	42	107	133	108	343	123	62	32	26	34
25	35	31	40	70	96	98	312	96	55	35	25	32
26	56	30	40	61	82	89	188	85	50	32	26	31
27	73	51	39	55	72	98	153	119	46	32	26	31
28	54	125	40	53	69	455	135	92	45	31	51	30
29	42	55	41	50	---	178	122	83	86	30	148	29
30	33	60	40	50	---	127	111	108	86	29	64	59
31	29	---	38	62	---	110	---	132	---	60	66	---
TOTAL	1033	1332	1484	1960	2107	5155	6553	3263	2113	1186	1272	1194
MEAN	33.3	44.4	47.9	63.2	75.3	166	218	105	70.4	38.3	41.0	39.8
MAX	73	125	148	182	133	455	657	209	163	76	148	134
MIN	28	27	36	36	49	71	91	68	45	29	25	17
CFSM	.76	1.01	1.09	1.44	1.71	3.77	4.95	2.39	1.60	.87	.93	.90
IN.	.87	1.13	1.25	1.66	1.78	4.36	5.54	2.76	1.79	1.00	1.08	1.01

CAL YR 1982 TOTAL 20753 MEAN 56.9 MAX 406 MIN 23 CFSM 1.29 IN. 17.55
WTR YR 1983 TOTAL 28652 MEAN 78.5 MAX 657 MIN 17 CFSM 1.78 IN. 24.22

01408120 NORTH BRANCH METEDECONK RIVER NEAR LAKEWOOD, NJ

LOCATION.--Lat 40°05'30", long 74°09'10", Ocean County, Hydrologic Unit 02040301, on downstream left bank at bridge on State Route 549, 1.0 mi upstream from confluence with South Branch Metedeconk River, and 2.3 mi east of Lakewood.

DRAINAGE AREA.--34.9 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1972 to current year.

GAGE.--Water-stage recorder. Datum of gage is 3.89 ft National Geodetic Vertical Datum of 1929. Prior to Nov. 17, 1977 gage located on upstream side of bridge.

REMARKS.--Water-discharge records good.

AVERAGE DISCHARGE.--11 years, 63.1 ft^3/s, 24.55 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,370 ft^3/s Nov. 8, 1977, gage height, 9.28 ft, from rating extended above 500 ft^3/s; minimum, 11 ft^3/s many days in August and September, 1981.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 250 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)
Apr. 11	0315	*371	6.86
Apr. 17	1730	257	6.28

Minimum discharge, 15 ft^3/s Aug. 26-28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	27	59	32	41	49	68	68	107	44	37	83
2	21	27	63	31	38	93	61	66	84	40	50	40
3	20	26	50	30	52	90	119	64	65	37	30	31
4	19	26	41	29	49	71	193	87	71	36	26	29
5	19	31	37	28	40	53	145	84	69	37	25	27
6	18	31	39	45	38	47	106	72	61	39	24	25
7	18	27	39	43	108	101	73	64	55	36	23	23
8	18	26	34	37	90	129	70	60	51	35	21	21
9	18	25	31	33	57	156	85	58	48	33	20	20
10	18	25	29	34	48	137	160	56	47	32	19	19
11	18	24	29	100	41	138	339	55	46	30	28	19
12	20	24	31	94	43	150	224	54	44	30	88	21
13	19	74	31	59	44	146	153	53	42	28	66	42
14	21	84	29	43	43	108	101	52	40	27	40	33
15	20	62	31	64	43	80	78	53	39	26	30	26
16	19	44	71	85	46	61	127	87	38	27	26	23
17	19	35	101	67	51	55	246	144	38	26	24	22
18	18	31	68	50	63	75	193	119	39	25	23	23
19	18	30	46	38	70	155	162	92	41	31	25	21
20	20	28	45	37	64	160	156	73	50	49	22	20
21	24	28	42	32	60	131	144	73	129	34	19	20
22	22	27	38	32	59	137	123	105	142	85	17	72
23	21	27	35	47	70	113	99	125	85	65	17	55
24	21	27	34	75	80	89	136	131	55	39	17	34
25	45	27	34	61	73	66	197	107	45	38	16	27
26	115	26	33	50	59	59	156	74	41	33	16	25
27	84	25	32	43	50	63	123	70	39	29	15	24
28	45	25	32	39	45	170	93	69	39	26	44	23
29	33	80	33	37	---	171	79	68	66	25	159	23
30	30	78	34	36	---	121	72	78	54	23	81	41
31	28	---	32	45	---	90	---	162	---	28	90	---
TOTAL	854	1077	1283	1476	1565	3264	4081	2523	1770	1093	1138	912
MEAN	27.5	35.9	41.4	47.6	55.9	105	136	81.4	59.0	35.3	36.7	30.4
MAX	115	84	101	100	108	171	339	162	142	85	159	83
MIN	18	24	29	28	38	47	61	52	38	23	15	19
CFSM	.79	1.03	1.19	1.36	1.60	3.01	3.90	2.33	1.69	1.01	1.05	.87
IN.	.91	1.15	1.37	1.57	1.67	3.48	4.35	2.69	1.89	1.17	1.21	.97

CAL YR 1982 TOTAL 15883 MEAN 43.5 MAX 254 MIN 16 CFSM 1.25 IN. 16.93
WTR YR 1983 TOTAL 21036 MEAN 57.6 MAX 339 MIN 15 CFSM 1.65 IN. 22.42

01408500 TOMS RIVER NEAR TOMS RIVER, NJ
(National stream quality accounting network station)

LOCATION.--Lat 39°59'10", long 74°13'29", Ocean County, Hydrologic Unit 02040301, on left bank 1.9 mi downstream from Union Branch, and 2.6 mi northwest of Toms River.

DRAINAGE AREA.--123 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1928 to current year. Monthly discharge only for October, November 1928, published in WSP 1302.

REVISED RECORDS.--WSP 1702: 1938. WDR NJ-76-1: 1975(M). WDR NJ-77-1: 1976.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 8.10 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records good.

AVERAGE DISCHARGE.--55 years, 215 ft^3/s, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,000 ft^3/s Sept. 23, 1938, gage height, 12.50 ft, from floodmark, from rating curve extended above 1,500 ft^3/s; minimum, 46 ft^3/s many days in August and September 1966, gage height, 2.70 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 784 ft^3/s Apr. 12, gage height, 8.02 ft; minimum, 65 ft^3/s Oct. 7, gage height, 2.94 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	98	126	212	136	154	179	401	341	308	213	124	478
2	95	114	221	132	150	217	334	310	314	201	127	472
3	93	108	205	127	158	231	370	292	284	185	115	378
4	87	104	198	123	162	239	442	273	269	171	100	262
5	92	107	180	122	158	222	523	304	261	154	95	195
6	89	114	170	137	149	197	536	346	252	148	101	162
7	79	111	163	145	188	240	461	334	239	144	102	143
8	79	105	150	144	205	294	381	288	216	131	95	129
9	81	101	142	141	197	359	345	259	200	131	93	121
10	80	98	134	136	185	419	410	240	192	132	88	115
11	77	96	133	191	172	467	560	270	186	123	90	111
12	76	95	136	213	153	494	739	256	178	118	161	107
13	79	145	134	229	169	490	700	237	168	108	176	142
14	82	187	127	210	165	461	571	222	159	105	172	152
15	81	201	127	194	160	410	468	211	149	104	145	143
16	82	206	162	201	163	328	471	243	144	106	126	132
17	81	186	212	203	170	268	537	343	142	105	114	131
18	77	163	227	193	187	274	626	391	151	101	97	130
19	76	148	228	168	207	375	663	445	155	104	91	121
20	76	139	204	152	215	417	629	375	176	151	99	118
21	80	133	184	142	213	496	602	300	292	153	96	130
22	82	124	167	136	208	516	570	351	370	160	89	185
23	85	121	156	148	214	475	528	395	451	160	85	213
24	84	117	153	182	230	443	530	493	426	155	83	195
25	104	117	147	194	236	389	540	538	332	157	82	173
26	186	115	145	190	228	320	553	468	238	168	82	150
27	195	111	140	177	202	283	562	391	193	152	88	144
28	196	108	139	165	183	383	512	339	182	130	93	132
29	185	158	141	158	---	414	444	322	233	113	274	124
30	166	193	142	152	---	486	379	325	234	108	294	118
31	146	---	139	155	---	467	---	316	---	118	361	---
TOTAL	3169	3951	5118	5096	5181	11253	15387	10218	7094	4309	3938	5306
MEAN	102	132	165	164	185	363	513	330	236	139	127	177
MAX	196	206	228	229	236	516	739	538	451	213	361	478
MIN	76	95	127	122	149	179	334	211	142	101	82	107
CFSM	.83	1.07	1.34	1.33	1.50	2.95	4.17	2.68	1.92	1.13	1.03	1.44
IN.	.96	1.19	1.55	1.54	1.57	3.40	4.65	3.09	2.15	1.30	1.19	1.60

CAL YR 1982 TOTAL 60994 MEAN 167 MAX 479 MIN 75 CFSM 1.36 IN. 18.45
WTR YR 1983 TOTAL 80020 MEAN 219 MAX 739 MIN 76 CFSM 1.78 IN. 24.20

01408500 TOMS RIVER NEAR TOMS RIVER, NJ--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1963 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: November 1974 to September 1981 (discontinued).
WATER TEMPERATURES: November 1963 to May 1966, November 1974 to September 1981 (discontinued).

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	TURBIDITY (NTU)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
NOV											
11...	1400	96	74	4.2	10.0	2.0	11.0	95	.9	K19	700
FEB											
23...	0930	209	71	4.6	6.0	1.9	11.6	93	.8	K4	<4
JUN											
22...	1100	365	56	4.7	18.5	2.6	7.4	78	2.2	6000	2000
AUG											
29...	1200	301	61	4.9	21.5	4.9	7.3	82	1.8	K1800	K11000

DATE	HARDNESS (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)
NOV										
11...	12	2.8	1.3	5.5	1.1	2.0	12	9.0	<.10	5.9
FEB										
23...	11	2.9	.97	4.2	.90	1.0	13	7.9	<.10	4.4
JUN										
22...	10	2.4	.90	4.2	1.0	1.0	11	7.1	<.10	4.2
AUG										
29...	11	2.7	1.0	4.4	1.0	1.0	12	6.7	<.10	3.7

DATE	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, DISSOLVED (MG/L AS P)	PHOSPHORUS, ORTHO, DISSOLVED (MG/L AS P)
NOV										
11...	42	4	1.0	91	.480	.070	.20	.030	<.010	<.010
FEB										
23...	59	5	2.8	69	.360	.040	.30	.010	<.010	<.010
JUN										
22...	41	16	16	59	.180	.100	.40	.190	.020	<.010
AUG										
29...	33	12	9.8	75	.400	.060	.60	.060	.030	.030

01408500 TOMS RIVER NEAR TOMS RIVER, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	BERYLLIUM, DISSOLVED (UG/L AS BE)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)
NOV											
11...	1400	130	1	40	<1	<1	<1	<3	1	190	<1
FEB											
23...	0930	240	1	36	<1	2	<1	<3	4	310	10
JUN											
22...	1100	320	1	43	<0	5	5	<3	4	610	6
AUG											
29...	1200	--	1	54	<0	2	<1	<3	4	320	2

DATE	LITHIUM, DISSOLVED (UG/L AS LI)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY DISSOLVED (UG/L AS HG)	MOLYBDENUM, DISSOLVED (UG/L AS MO)	NICKEL, DISSOLVED (UG/L AS NI)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)	STRONTIUM, DISSOLVED (UG/L AS SR)	VANADIUM, DISSOLVED (UG/L AS V)	ZINC, DISSOLVED (UG/L AS ZN)
NOV										
11...	<4	44	<.1	<10	1	<1	2	18	<6	14
FEB										
23...	<4	37	.5	<10	4	<1	<1	17	<6	21
JUN										
22...	4	32	.2	<10	4	<1	<1	16	<6	27
AUG										
29...	<4	35	<.1	<10	2	<1	<1	19	<6	23

01409095 OYSTER CREEK NEAR BROOKVILLE, NJ

LOCATION.--Lat 39°47'54", long 74°15'02", Ocean County, Hydrologic Unit 02040301, on left bank 100 ft upstream from bridge on State Highway 532, 1.5 mi downstream from reservoir at Wells Mill, and 3.2 mi northeast of Brookville.

DRAINAGE AREA.--7.43 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1965 to current year.

REVISED RECORDS.--WDR NJ-82-1: 1981.

GAGE.--Water-stage recorder. Datum of gage is 24.74 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records poor. Flow probably contains considerable ground-water inflow from other surface drainage basins. Some minor regulation possible from small reservoirs and cranberry bogs upstream.

AVERAGE DISCHARGE.--18 years, 28.4 ft^3/s, 51.91 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 284 ft^3/s July 4, 1978, gage height, 7.93 ft; minimum, 2.4 ft^3/s July 29, 1981.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 75 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)
Apr. 17	0345	*106	5.59
Apr. 24	2215	90	5.45

Minimum daily discharge, 16 ft^3/s Nov. 9, 10, 11, 25, 27, 28, Aug. 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	18	29	23	18	28	43	34	43	30	23	19
2	17	18	31	21	18	54	39	35	41	29	22	19
3	16	18	26	19	26	64	54	41	40	27	23	18
4	15	17	22	19	23	50	60	49	39	27	21	18
5	15	20	20	19	19	37	64	53	37	26	20	19
6	15	18	22	24	19	33	60	47	35	26	21	19
7	15	17	27	23	49	40	48	40	29	26	22	18
8	16	17	21	21	56	56	44	37	28	24	21	18
9	16	16	19	19	34	62	48	35	27	25	23	18
10	15	16	19	21	26	58	68	31	26	24	22	20
11	16	16	18	29	24	63	120	32	25	23	19	18
12	16	17	19	28	24	65	90	30	26	23	20	18
13	16	42	20	26	22	52	60	31	27	22	29	20
14	17	47	20	23	23	43	35	34	23	22	26	20
15	16	32	19	23	24	38	33	38	23	22	24	20
16	16	25	19	26	26	35	52	50	22	22	22	19
17	16	20	20	23	29	35	100	60	22	21	23	19
18	15	19	20	23	36	50	49	62	22	21	22	20
19	21	18	18	21	37	66	50	50	26	21	20	19
20	19	17	18	18	33	58	54	42	26	21	20	17
21	19	17	26	18	31	56	47	41	38	25	22	18
22	18	17	23	18	32	54	40	51	39	23	20	27
23	17	17	20	25	37	52	36	66	37	27	18	21
24	22	17	18	35	40	45	60	60	33	27	18	19
25	30	16	21	27	31	37	70	55	29	26	18	19
26	53	17	43	23	27	33	47	52	26	26	18	18
27	39	16	35	21	24	36	41	47	25	26	16	18
28	34	16	25	20	22	45	34	44	27	24	18	18
29	28	40	22	19	---	60	31	44	35	23	19	18
30	21	46	25	19	---	69	30	42	33	22	19	27
31	19	---	28	20	---	51	---	43	---	22	20	---
TOTAL	625	647	713	694	810	1525	1607	1376	909	753	649	579
MEAN	20.2	21.6	23.0	22.4	28.9	49.2	53.6	44.4	30.3	24.3	20.9	19.3
MAX	53	47	43	35	56	69	120	66	43	30	29	27
MIN	15	16	18	18	18	28	30	30	22	21	16	17
CFSM	2.72	2.91	3.10	3.01	3.89	6.62	7.21	5.98	4.08	3.27	2.81	2.60
IN.	3.13	3.24	3.57	3.47	4.06	7.64	8.05	6.89	4.55	3.77	3.25	2.90

CAL YR 1982 TOTAL 8025 MEAN 22.0 MAX 57 MIN 15 CFSM 2.96 IN. 40.18
WTR YR 1983 TOTAL 10887 MEAN 29.8 MAX 120 MIN 15 CFSM 4.01 IN. 54.51

01409280 WESTECUNK CREEK AT STAFFORD FORGE, NJ

LOCATION.--Lat 39°40'00", long 74°19'12", Ocean County, Hydrologic Unit 02040301, 75 ft downstream from dam, 0.2 mi south of Stafford Forge, 1.2 mi downstream from Log Swamp Branch, and 2.0 mi west of Staffordville.

DRAINAGE AREA.--15.8 mi², revised.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1973 to current year. Occasional low-flow measurements, water years 1969-73, at site 400 ft downstream.

GAGE.--Water-stage recorder. Datum of gage is 6.36 ft National Geodetic Vertical Datum of 1929. Prior to Aug. 6, 1981, water-stage recorder and wooden control at site 50 ft upstream at datum 9.42 ft higher.

REMARKS.--Water-discharge records fair. Flow regulated by dam 75 ft upstream.

AVERAGE DISCHARGE.--10 years, 32.9 ft³/s, 28.28 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 256 ft³/s July 4, 1978, gage height, 3.70 ft; no flow part of May 17, 1974, Sept. 7, 1978.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 75 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Apr. 11	1045	*111	11.67	Aug. 8	2100	82	11.33
Apr. 17	1145	92	11.43	Aug. 22	1830	92	11.43
Apr. 25	1345	78	11.29				

Minimum daily discharge, 12 ft³/s Aug. 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	18	36	21	21	33	35	33	43	39	26	38
2	22	18	35	21	20	44	32	31	43	36	26	36
3	26	18	32	21	24	36	48	35	38	34	26	34
4	27	18	29	20	23	32	58	36	43	33	25	32
5	27	21	26	20	20	29	49	33	41	33	25	32
6	25	20	29	23	20	27	40	30	38	35	25	31
7	23	19	29	22	37	32	37	27	35	33	25	31
8	22	18	26	21	39	37	37	25	35	31	35	29
9	21	18	24	20	30	40	39	25	34	30	28	28
10	20	17	22	22	27	40	69	25	32	27	19	29
11	20	17	23	32	30	39	105	25	31	27	23	31
12	19	17	23	30	37	45	88	25	29	26	30	30
13	20	36	24	25	31	40	61	25	30	26	28	30
14	21	39	23	23	27	35	49	25	27	25	26	30
15	23	37	22	26	26	33	42	28	27	25	25	28
16	24	32	33	27	26	30	62	43	26	25	27	28
17	21	28	44	24	29	28	89	52	26	25	26	27
18	19	25	36	23	33	34	81	45	26	25	24	27
19	18	23	31	21	34	52	72	39	29	25	24	26
20	18	23	31	20	33	49	70	39	33	26	24	26
21	20	22	28	20	32	44	61	43	46	27	24	25
22	21	21	26	20	31	43	51	50	47	38	35	31
23	21	21	24	24	36	36	45	56	40	35	27	29
24	20	21	24	29	39	33	58	57	36	35	23	27
25	30	20	23	26	35	32	74	52	33	33	22	26
26	49	20	23	24	32	30	64	46	31	32	12	26
27	40	19	22	23	28	30	54	46	31	30	22	26
28	30	19	22	22	27	53	46	42	32	29	29	26
29	25	42	23	21	---	55	40	41	51	27	19	25
30	21	42	23	21	---	43	35	40	44	26	15	30
31	20	---	22	22	---	37	---	41	---	26	29	---
TOTAL	736	709	838	714	827	1171	1691	1160	1057	925	774	874
MEAN	23.7	23.6	27.0	23.0	29.5	37.8	56.4	37.4	35.2	29.8	25.0	29.1
MAX	49	42	44	32	39	55	105	57	51	39	35	38
MIN	18	17	22	20	20	27	32	25	26	25	12	25
CFSM	1.50	1.49	1.71	1.46	1.87	2.39	3.57	2.37	2.23	1.89	1.58	1.84
IN.	1.73	1.67	1.97	1.68	1.95	2.76	3.98	2.73	2.49	2.18	1.82	2.06

CAL YR 1982 TOTAL 9094 MEAN 24.9 MAX 58 MIN 14 CFSM 1.58 IN. 21.41
WTR YR 1983 TOTAL 11476 MEAN 31.4 MAX 105 MIN 12 CFSM 1.99 IN. 27.02

01409387 MULLICA RIVER AT OUTLET OF ATSION LAKE, AT ATSION, NJ

LOCATION.--Lat 39°44'25", long 74°43'37", Burlington County, Hydrologic Unit 02040301, at bridge on U.S. Route 206 in Atsion, at outlet of Atsion Lake, and 0.2 mi upstream from Wesickaman Creek.

DRAINAGE AREA.--26.7 mi².

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976 to current year.

COOPERATION.--Field data and samples for laboratory analyses supplied by New Jersey Department of Environmental Protection, Division of Water Resources. Analyses of fecal coliform and fecal streptococci by the MPN method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, FECAL, EC BROTH (MPN)	STREPTOCOCCI FECAL (MPN)	HARDNESS (MG/L AS CACO3)
JAN										
20...	0920	30	66	4.3	0.0	14.2	E2.2	<20	<20	10
MAR										
17...	0930	69	64	4.0	8.0	11.6	1.5	<20	<2	8
MAY										
23...	0940	160	46	4.3	18.5	8.8	E1.8	110	130	6
JUL										
26...	0830	21	35	5.0	23.5	8.1	E.0	80	18	8
AUG										
23...	1200	15	35	5.2	26.0	8.6	<.9	20	8	7

DATE	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	SULFIDE TOTAL (MG/L AS S)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)
JAN									
20...	2.3	1.1	3.7	.90	<1.0	--	12	6.1	<.10
MAR									
17...	1.8	.81	2.7	.70	<1.0	--	13	4.4	<.10
MAY									
23...	1.5	.55	2.1	.80	<1.0	.5	10	3.5	<.10
JUL									
26...	1.9	.79	3.0	.60	1.0	--	11	5.0	<.10
AUG									
23...	1.6	.74	3.1	.60	2.0	--	8.9	4.0	<.10

DATE	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHATE, TOTAL (MG/L AS PO4)	CARBON, ORGANIC TOTAL (MG/L AS C)
JAN									
20...	4.3	35	<.010	.200	<.050	.38	.58	.12	4.5
MAR									
17...	2.5	37	<.010	<.100	<.050	.43	--	<.06	8.3
MAY									
23...	2.0	43	<.010	E.100	.130	E.36	--	.18	9.6
JUL									
26...	4.6	58	E.020	E.200	E.120	.47	--	E.18	15
AUG									
23...	3.4	27	.010	.300	.050	.40	.70	.09	5.7

01409387 MULLICA RIVER AT OUTLET OF ATSION LAKE, AT ATSION, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
MAY								
23...	0940	240	1	<10	40	<1	<10	1

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)
MAY							
23...	900	6	30	<.1	7	<1	50

01409400 MULLICA RIVER NEAR BATSTO, NJ

LOCATION.--Lat 39°40'28", long 74°39'55", Atlantic County, Hydrologic Unit 02040301, on right bank 2.4 mi upstream from Sleeper Branch, and 2.5 mi north of Batsto.

DRAINAGE AREA.--46.7 mi², revised.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1957 to current year.

REVISED RECORDS.--WRD-NJ 1969: 1958(M), 1960(M), 1967-68(M).

GAGE.--Water-stage recorder. Datum of gage is 11.93 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records good. Some regulation from upstream cranberry bogs and Atsion Lake. Diversions from Sleeper Branch enter river upstream of gage.

AVERAGE DISCHARGE.--26 years, 110 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,840 ft³/s Feb. 26, 1979, gage height, 6.14 ft; minimum, 7.0 ft³/s Sept. 6-8, 1966, gage height, 0.28 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 705 ft³/s Apr. 18, gage height, 4.43 ft; minimum daily, 22 ft³/s Sept. 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33	34	88	66	71	100	254	205	202	134	36	28
2	32	34	86	61	69	123	224	196	185	132	35	28
3	29	36	85	60	75	118	258	184	174	122	34	28
4	28	36	81	59	75	93	300	191	171	109	33	28
5	27	37	75	59	72	72	277	197	179	97	32	28
6	26	35	76	66	71	69	264	186	163	90	32	28
7	29	34	77	64	97	100	243	177	147	82	32	27
8	29	33	76	62	116	136	225	172	124	75	30	25
9	30	32	73	60	113	180	218	166	122	70	29	24
10	28	31	68	65	104	234	281	149	117	66	32	23
11	25	30	66	108	90	283	463	139	111	60	32	22
12	25	30	65	118	79	303	535	138	105	56	52	23
13	25	55	65	114	97	312	476	142	98	54	47	28
14	26	64	61	106	90	270	304	138	90	52	44	30
15	25	72	60	109	124	236	235	136	84	51	41	29
16	25	68	72	112	171	205	368	147	82	49	39	27
17	24	64	93	104	158	178	570	209	80	48	36	27
18	23	60	127	96	148	178	668	215	83	46	34	27
19	23	58	166	86	141	286	561	224	90	44	34	25
20	23	59	121	82	131	304	418	230	109	44	33	25
21	27	60	96	72	127	322	388	226	149	44	31	26
22	26	57	78	68	123	417	351	301	185	45	30	58
23	25	54	78	80	125	398	318	405	218	43	30	47
24	25	51	76	93	131	359	346	578	216	43	29	43
25	38	50	74	91	129	306	422	516	163	41	29	36
26	48	48	71	88	122	262	407	437	145	40	28	35
27	45	49	68	84	112	236	405	342	126	40	28	34
28	42	49	74	81	102	263	372	274	113	40	28	34
29	37	63	73	78	---	271	328	242	131	39	28	32
30	35	79	74	75	---	301	257	237	136	39	28	35
31	35	---	69	74	---	284	---	226	---	37	29	---
TOTAL	918	1462	2512	2541	3063	7199	10736	7325	4098	1932	1035	910
MEAN	29.6	48.7	81.0	82.0	109	232	358	236	137	62.3	33.4	30.3
MAX	48	79	166	118	171	417	668	578	218	134	52	58
MIN	23	30	60	59	69	69	218	136	80	37	28	22

CAL YR 1982 TOTAL 29838 MEAN 81.7 MAX 407 MIN 23
WTR YR 1983 TOTAL 43731 MEAN 120 MAX 668 MIN 22

393825074393500 MULLICA RIVER AT PLEASANT MILLS, NJ

LOCATION.--Lat 39°38'25", long 74°39'35", Burlington County, Hydrologic Unit 02040301, at bridge at Pleasant Mills, 0.3 mi upstream from confluence with outflow from Nescochague Lake, and 0.6 mi southwest of Batsto.

DRAINAGE AREA.--127 mi².

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976 to May 1983 (discontinued).

COOPERATION.--Field data and samples for laboratory analyses supplied by New Jersey Department of Environmental Protection, Division of Water Resources. Analyses of fecal coliform and fecal streptococci by MPN method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)	HARD-NESS (MG/L AS CACO3)
JAN 20...	1040	72	4.6	.5	13.6	E1.9	<20	<2	15
MAR 17...	1045	75	4.2	7.5	11.6	E1.3	<20	<2	12
MAY 23...	1100	54	4.2	18.0	7.9	E1.5	130	240	8

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFIDE TOTAL (MG/L AS S)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
JAN 20...	3.2	1.6	3.7	1.1	1.0	--	15	6.8	<.10
MAR 17...	2.6	1.3	2.9	1.0	<1.0	--	15	5.5	<.10
MAY 23...	1.8	.76	2.5	1.3	<1.0	<.5	10	5.3	<.10

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHATE, TOTAL (MG/L AS PO4)	CARBON, ORGANIC TOTAL (MG/L AS C)
JAN 20...	5.5	44	<.010	.400	.080	.47	.87	.09	5.0
MAR 17...	2.9	37	<.010	.200	.050	.55	.75	.06	8.3
MAY 23...	1.8	55	<.010	E.100	.130	E.65	--	.24	12

393825074393500 MULLICA RIVER AT PLEASANT MILLS, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS BE)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
MAY								
23...	1100	330	1	<10	70	<1	<10	2

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)
MAY							
23...	1500	13	20	<.1	8	<1	40

01409416 HAMMONTON CREEK AT WESCOATVILLE, NJ

LOCATION.--Lat 39°38'02", long 74°43'05", Atlantic County, Hydrologic Unit 02040301, at bridge on Chestnut Road in Wescoatville, 1.1 mi southwest of Nesco, 1.7 mi upstream from Norton Branch, and 3.8 mi southwest of Batsto.

DRAINAGE AREA.--9.57 mi², revised.

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1974 to current year.

COOPERATION.--Field data and samples for laboratory analyses supplied by New Jersey Department of Environmental Protection, Division of Water Resources. Analyses of fecal coliform and fecal streptococci by the MPN method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
JAN										
20...	1230	5.9	149	6.7	1.0	8.7	60	>8.9	17	2
APR										
06...	1130	22	109	6.2	10.5	7.1	63	2.8	17	23
JUN										
06...	1100	23	106	--	18.5	4.9	--	3.0	49	<200
JUL										
11...	0945	11	114	6.2	18.5	5.8	62	2.4	<20	<200
AUG										
11...	1300	--	--	6.4	21.5	5.6	--	E1.3	50	240

DATE	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFIDE TOTAL (MG/L AS S)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
JAN										
20...	28	7.3	2.4	11	3.4	7.0	--	15	15	.20
APR										
06...	25	6.3	2.2	8.2	3.0	4.0	--	20	10	.20
JUN										
06...	24	6.1	2.2	7.8	2.6	4.0	<.5	17	11	.20
JUL										
11...	22	5.4	2.0	11	2.7	8.0	--	14	14	.30
AUG										
11...	12	3.0	1.1	12	2.1	9.0	--	9.5	10	.40

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHATE, TOTAL (MG/L AS PO4)	CARBON, ORGANIC TOTAL (MG/L AS C)
JAN									
20...	8.4	92	.050	1.80	2.30	2.4	4.2	1.60	14
APR									
06...	5.4	79	.040	1.80	1.10	1.6	3.4	1.40	6.2
JUN									
06...	6.3	70	.050	2.00	.460	1.5	3.5	1.50	7.5
JUL									
11...	7.4	89	.030	--	--	--	--	--	6.1
AUG									
11...	7.1	85	.010	1.80	<.050	.76	2.6	1.53	6.2

01409416 HAMMONTON CREEK AT WESCOATVILLE, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYL-LIUM, TOTAL RECOV-ERABLE (UG/L AS BE)	BORON, TOTAL RECOV-ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)
JUN								
06...	1100	90	1	<10	70	1	10	8

DATE	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	SELE-NIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
JUN								
06...	750	1	30	.2	4	<1	50	<1

01409500 BATSTO RIVER AT BATSTO, NJ

LOCATION.--Lat 39°38'33", long 74°39'00", Burlington County, Hydrologic Unit 02040301, on right bank 30 ft downstream from bridge on State Highway 542 at Batsto, and 1.0 mi upstream from mouth.

DRAINAGE AREA.--67.8 mi^2, revised.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1927 to current year. Monthly discharge only for April to September 1939, published in WSP 1302.

REVISED RECORDS.--WSP 1432: 1930, 1933, 1936, 1938.

GAGE.--Water-stage recorder. Concrete control since Oct. 12, 1939; prior to Mar. 24, 1939, wooden control at site 50 ft downstream. Datum of gage is 1.4 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records good. Considerable regulation at times by sluice gates prior to December 1954 and by automatic Bascule and sluice gates since July 1959 at Batsto Lake, 300 ft upstream, capacity, about 60,000,000 gal.

AVERAGE DISCHARGE.--56 years, 125 ft^3/s, 25.04 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 1,310 ft^3/s Aug. 24, 1933; maximum gage height, 8.7 ft Aug. 20, 1939, from floodmark; minimum daily discharge, 5.7 ft^3/s Oct. 4, 1959.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 570 ft^3/s Apr. 18; minimum daily, 46 ft^3/s Oct. 11, 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	55	53	116	82	93	117	230	189	192	151	59	51
2	54	52	114	79	90	128	200	172	180	143	59	51
3	50	52	112	77	93	137	235	162	167	133	58	51
4	50	52	108	76	96	140	245	164	166	120	57	49
5	50	57	100	76	94	131	285	172	163	110	57	51
6	50	59	102	82	91	123	260	177	157	104	57	49
7	50	59	103	87	104	129	228	171	150	98	56	49
8	52	59	103	83	120	160	205	163	140	93	55	48
9	51	58	96	80	129	180	197	152	133	89	54	48
10	47	56	91	82	128	230	230	143	126	86	54	48
11	46	59	89	110	123	255	352	130	121	81	56	48
12	46	63	90	131	112	280	485	127	119	79	72	47
13	47	85	87	143	109	264	390	133	115	77	70	54
14	50	92	82	134	108	255	300	135	110	75	64	56
15	49	95	81	124	109	220	260	130	105	73	60	54
16	48	86	90	121	111	190	285	140	105	71	58	52
17	47	79	116	123	116	168	468	170	102	66	57	50
18	47	78	128	115	124	165	570	231	109	67	56	52
19	47	80	129	106	135	200	460	222	108	66	55	49
20	49	81	117	95	140	300	373	201	124	66	56	48
21	57	76	110	90	136	340	332	202	150	67	54	50
22	56	74	103	88	132	340	294	249	165	71	52	72
23	51	69	97	96	136	342	257	400	182	72	52	74
24	52	68	92	105	134	291	245	545	182	70	52	67
25	55	66	88	112	136	242	290	485	165	68	52	59
26	65	66	87	109	131	220	250	375	138	67	50	53
27	66	65	83	105	123	190	330	295	125	65	50	52
28	63	65	81	100	115	210	280	240	117	64	51	52
29	59	94	85	95	---	270	235	220	130	62	51	53
30	55	108	89	94	---	285	211	215	147	62	52	56
31	53	---	87	94	---	255	---	210	---	60	52	---
TOTAL	1617	2106	3056	3094	3268	6757	8982	6720	4193	2576	1738	1593
MEAN	52.2	70.2	98.6	99.8	117	218	299	217	140	83.1	56.1	53.1
MAX	66	108	129	143	140	342	570	545	192	151	72	74
MIN	46	52	81	76	90	117	197	127	102	60	50	47
CFSM	.77	1.04	1.45	1.47	1.73	3.22	4.41	3.20	2.06	1.23	.83	.78
IN.	.89	1.16	1.68	1.70	1.79	3.71	4.93	3.69	2.30	1.41	.95	.87

CAL YR 1982 TOTAL 34474 MEAN 94.4 MAX 323 MIN 45 CFSM 1.39 IN. 18.91
WTR YR 1983 TOTAL 45700 MEAN 125 MAX 570 MIN 46 CFSM 1.84 IN. 25.07

01409500 BATSTO RIVER AT BATSTO, NJ--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1925, 1956, 1962-63, 1976 to current year.

COOPERATION.--Field data and samples for laboratory analyses supplied by New Jersey Department of Environmental Protection, Division of Water Resources. Analyses of fecal coliform and fecal streptococci by the MPN method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)	HARD-NESS (MG/L AS CACO3)
JAN 20...	1120	96	59	4.4	.5	15.2	E1.6	<20	<2	10
MAR 17...	1130	171	69	4.1	8.0	11.5	E1.4	<20	<2	10
MAY 23...	1240	413	34	4.3	18.0	8.2	E1.9	80	46	6
JUL 19...	1320	66	28	5.6	25.0	8.1	E1.3	<20	94	6
AUG 23...	1050	52	25	5.2	25.0	8.8	<.9	<20	<2	5

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFIDE TOTAL (MG/L AS S)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
JAN 20...	2.5	1.0	2.5	.70	<1.0	--	11	5.0	<.10
MAR 17...	2.3	1.0	2.1	.70	<1.0	--	13	4.4	<.10
MAY 23...	1.5	.61	2.0	.60	<1.0	<.5	11	3.7	<.10
JUL 19...	1.5	.58	2.7	.60	3.0	--	4.9	3.6	<.10
AUG 23...	1.1	.48	2.4	.50	2.0	--	4.6	3.5	<.10

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHATE, TOTAL (MG/L AS PO4)	CARBON, ORGANIC TOTAL (MG/L AS C)
JAN 20...	5.9	34	<.010	.170	<.050	.33	.50	.06	3.5
MAR 17...	3.6	31	<.010	<.100	<.050	.40	--	<.06	6.5
MAY 23...	2.3	45	<.010	E.100	.110	E.36	--	.18	11
JUL 19...	5.3	25	<.010	.200	<.050	.25	.45	.18	7.0
AUG 23...	4.0	21	.010	.200	.010	.16	.36	.09	2.6

01409500 BATSTO RIVER AT BATSTO, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
MAY								
23...	1240	250	1	<10	50	1	<10	2

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
MAY								
23...	1300	8	20	<.1	6	<1	40	1

01409510 BATSTO RIVER AT PLEASANT MILLS, NJ

LOCATION.--Lat 39°37'55", long 74°38'40", Burlington County, Hydrologic Unit 02040301, on right bank, 0.5 mi southeast of Pleasant Mills.

DRAINAGE AREA.--73.6 mi².

TIDE ELEVATION DATA

PERIOD OF RECORD.--July 1958 to current year. Annual maximum only published for 1958 to 1965.

GAGE.--Water-stage recorder. Datum of gage is -8.6 ft National Geodetic Vertical Datum of 1929. Gage-height record converted to elevation above or below (-) National Geodetic Vertical Datum of 1929 for publication.

REMARKS.--Elevation records good. Summaries for months with short periods of no gage-height record have been estimated with negligible or no loss of accuracy unless otherwise noted. Some periods cannot be estimated and are noted by dash (--) lines. Missing on doubtful record on Jan. 21-31, Feb. 1-Mar. 3, Mar. 27-31, Apr. 1-17.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation recorded, 7.2 ft Mar. 7, 1962; minimum (1967-69), -0.40 ft Oct 18, 1970.

EXTREMES FOR CURRENT YEAR.--Maximum elevation recorded, 4.70 ft Mar. 19; minimum, -0.16 ft Oct. 17.

Summaries of tide elevations during year are as follows:

TIDE ELEVATIONS, IN FEET, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

		OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
Maximum	Elevation	4.20	3.33	3.69	3.34	--	4.70	3.77	3.53	3.37	3.31	3.37	3.50
high tide	Date	25	4	19	10	--	19	24	24	29	25	12	29
Minimum	Elevation	-0.16	-0.10	0.12	0.10	--	0.41	0.99	0.43	0.41	0.17	0.14	0.17
low tide	Date	17	9	27	9	--	6	30	11	12	30	3	10
Mean high tide		2.82	2.38	2.52	--	--	--	--	2.72	2.72	2.65	2.69	2.70
Mean water level		1.68	1.22	1.48	--	--	--	--	1.88	1.81	1.59	1.58	1.60
Mean low tide		0.41	0.19	0.53	--	--	--	--	1.03	0.83	0.50	0.45	0.48

01409810 WEST BRANCH WADING RIVER NEAR JENKINS, NJ

LOCATION.--Lat 39°41'17", long 74°32'54", Burlington County, Hydrologic Unit 02040301, on right bank 900 ft downstream from Godfrey Bridge, 2.2 mi downstream from Little Hospitality Brook, and 1.2 mi southwest of Jenkins.

DRAINAGE AREA.--84.1 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1974 to current year.

REVISED RECORDS.--WDR NJ-77-1: 1976. WDR NJ-81-1: 1975(P), 1976(P), 1977(P), 1978(P), 1979(P), 1980(P).

GAGE.--Water-stage recorder. Datum of gage is 29.09 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records good. Some regulation by cranberry bogs and small ponds.

AVERAGE DISCHARGE.--9 years, 148 ft³/s, 23.90 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,320 ft³/s Feb. 26, 1979, gage height, 16.14 ft; minimum, 22 ft³/s July 24, 1977, gage height 10.16 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 600 ft³/s and maximum(*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Apr. 11	1930	629	14.33	May 23	1400	623	14.31
Apr. 17	1415	*669	14.46				

Minimum discharge, 26 ft³/s Sept. 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	37	52	102	84	105	130	272	208	229	177	48	38
2	55	107	110	81	103	203	222	197	218	149	47	35
3	71	59	92	85	113	224	330	160	200	133	40	34
4	54	52	81	82	112	205	465	185	203	96	38	32
5	40	48	74	82	100	172	546	204	210	89	37	32
6	35	46	81	106	97	151	446	208	195	82	37	32
7	34	45	83	95	152	181	360	190	172	72	42	35
8	36	43	83	89	176	226	302	183	158	66	35	34
9	42	43	66	84	153	281	273	161	114	63	34	32
10	61	42	57	92	139	340	381	137	119	60	35	32
11	54	42	56	176	126	375	613	149	126	57	36	29
12	42	43	60	160	140	407	618	169	117	55	70	28
13	41	110	66	137	155	377	531	193	111	54	68	41
14	43	150	67	120	147	329	417	182	95	52	56	48
15	43	138	72	135	144	268	349	152	88	50	49	45
16	44	131	123	164	148	202	399	183	81	48	44	39
17	39	104	162	137	173	175	641	304	81	48	40	40
18	36	87	142	124	198	193	621	293	81	47	39	40
19	37	76	123	112	188	336	556	279	96	48	39	36
20	45	70	117	99	150	381	511	269	105	49	39	39
21	45	63	111	94	140	398	438	263	182	47	37	42
22	41	57	103	92	140	408	373	385	221	60	36	84
23	38	54	100	112	150	320	347	600	171	54	37	65
24	36	53	98	141	164	280	392	598	151	53	37	51
25	67	51	96	130	152	238	478	499	135	53	33	54
26	103	49	95	121	141	213	474	405	116	52	34	50
27	78	47	93	115	128	190	383	331	103	50	36	56
28	59	47	104	111	122	310	301	262	102	48	36	71
29	71	126	98	102	---	334	264	228	178	46	40	54
30	80	129	98	101	---	330	236	222	207	48	44	56
31	55	---	91	109	---	344	---	226	---	48	42	---
TOTAL	1562	2164	2904	3472	3956	8521	12539	8025	4365	2054	1285	1304
MEAN	50.4	72.1	93.7	112	141	275	418	259	146	66.3	41.5	43.5
MAX	103	150	162	176	198	408	641	600	229	177	70	84
MIN	34	42	56	81	97	130	222	137	81	46	33	28
CFSM	.60	.86	1.11	1.33	1.68	3.27	4.97	3.08	1.74	.79	.49	.52
IN.	.69	.96	1.28	1.54	1.75	3.77	5.55	3.55	1.93	.91	.57	.58

CAL YR 1982 TOTAL 38392 MEAN 105 MAX 315 MIN 28 CFSM 1.25 IN. 16.98
WTR YR 1983 TOTAL 52151 MEAN 143 MAX 641 MIN 28 CFSM 1.70 IN. 23.07

01409815 WEST BRANCH WADING RIVER AT MAXWELL, NJ
(National stream-quality accounting network station)

LOCATION.--Lat 39°40'30", long 74°32'28", Burlington County, Hydrologic Unit 02040301, at bridge on State Highway 563 in Maxwell, 1.6 mi southeast of Washington, 1.8 mi southwest of Jenkins, and 2.2 mi upstream from confluence with Oswego River.

DRAINAGE AREA.--85.9 mi^2.

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976 to current year.

REMARKS.--Water-stage recorder located at station 01409810.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
NOV 26...	1100	49	48	3.2	7.0	1.5	11.7	95	.5	<4	--
JAN 10...	1100	90	47	4.3	6.5	2.5	11.1	88	.4	<4	450
MAR 17...	1130	175	52	4.3	8.5	1.6	10.1	84	.6	<4	--
MAY 16...	1300	166	45	4.3	16.5	3.6	7.3	74	.8	18	>10000
JUL 22...	1130	66	37	4.7	21.5	12	7.0	79	2.1	--	1000
SEP 28...	1130	85	43	4.2	15.0	2.2	9.0	87	.6	41	540

DATE	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)
NOV 26...	4	.82	.41	2.2	.60	<1.0	7.0	4.1	<.10	6.1
JAN 10...	4	.94	.45	2.4	.60	<1.0	8.9	4.3	<.10	5.6
MAR 17...	4	.76	.51	2.0	.40	<1.0	13	3.8	<.10	3.6
MAY 16...	3	.69	.42	2.7	.40	<1.0	9.0	4.0	<.10	4.4
JUL 22...	3	.82	.35	1.9	.70	1.0	6.8	4.9	<.10	6.0
SEP 28...	5	.92	.56	2.5	.70	<1.0	9.1	4.8	<.10	5.7

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P)
NOV 26...	26	4	.5	100	<.100	.050	.20	.050	.050	.010
JAN 10...	28	6	1.5	56	<.100	.020	.60	.180	<.010	<.010
MAR 17...	31	2	.9	80	<.100	<.010	<.10	<.010	<.010	<.010
MAY 16...	28	5	2.2	92	<.100	<.010	.20	.030	<.010	<.010
JUL 22...	25	26	4.6	81	<.100	.060	.90	.040	.030	<.010
SEP 28...	22	5	1.1	100	<.100	.020	.60	.060	<.010	<.010

01409815 WEST BRANCH WADING RIVER AT MAXWELL, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	BERYLLIUM, DISSOLVED (UG/L AS BE)	CADMIUM, DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)
NOV											
26...	1100	260	1	25	<1	<1	<1	<3	4	430	2
JAN											
10...	1100	290	1	28	<1	3	1	<3	3	430	6
MAY											
16...	1300	150	1	44	<0	2	2	<3	1	570	2
SEP											
28...	1130	260	1	32	<0	5	<1	<3	<1	410	2

DATE	LITHIUM DISSOLVED (UG/L AS LI)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY DISSOLVED (UG/L AS HG)	MOLYBDENUM, DISSOLVED (UG/L AS MO)	NICKEL, DISSOLVED (UG/L AS NI)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)	STRONTIUM, DISSOLVED (UG/L AS SR)	VANADIUM, DISSOLVED (UG/L AS V)	ZINC, DISSOLVED (UG/L AS ZN)
NOV										
26...	<4	18	1.1	<10	1	<1	<1	8	<6	16
JAN										
10...	<4	19	<.1	<10	<1	<1	<1	8	<6	25
MAY										
16...	<4	13	<.1	<10	3	<1	<1	6	<6	15
SEP										
28...	<4	19	<.1	<10	<1	<1	<1	10	<6	22

01410000 OSWEGO RIVER AT HARRISVILLE, NJ

LOCATION.--Lat 39°39'47", long 74°31'26", Burlington County, Hydrologic Unit 02040301, on right bank 50 ft downstream from bridge on State Highway Spur 563 at Harrisville, and 0.5 mi upstream from confluence with West Branch Wading River.

DRAINAGE AREA.--72.5 mi², revised.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1930 to current year. Monthly discharge only for some periods, published in WSP 1302. Prior to October 1955, published as "East Branch Wading River at Harrisville".

GAGE.--Water-stage recorder. Concrete control since June 23, 1939. Datum of gage is 4.62 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records good. Figures given herein represent flow over main spillway and through bypass channel. Flow regulated by Harrisville Pond 200 ft above station, capacity, about 30,000,000 gal and by ponds and cranberry bogs 5 to 10 mi upstream.

AVERAGE DISCHARGE.--53 years, 87.5 ft³/s, 16.39 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,390 ft³/s Aug. 20, 1939, gage height, 9.54 ft, from high-water mark in gage house, from rating curve extended above 640 ft³/s; no flow part of Oct. 26, 1932, June 10, 1970, and May 29, 30, 1974, while pond was filling.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 348 ft³/s Apr. 18, gage height, 4.14 ft; minimum, 20 ft³/s Oct. 9, 10, gage height, 2.74 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	39	62	43	48	79	130	118	142	71	29	27
2	22	37	62	38	47	123	116	109	138	64	34	27
3	23	38	62	39	51	123	175	105	123	58	27	27
4	24	37	59	39	49	114	215	108	122	53	28	26
5	22	40	57	40	48	102	222	103	120	51	29	26
6	22	38	55	59	48	91	176	94	110	45	30	35
7	22	36	59	55	77	110	140	83	101	46	30	26
8	22	32	55	51	83	134	137	79	96	44	28	25
9	22	31	49	47	77	154	138	98	88	43	28	24
10	21	30	42	51	68	166	208	93	82	40	27	24
11	23	29	41	87	64	166	324	72	77	42	31	26
12	23	28	44	82	73	189	329	68	74	42	56	27
13	25	38	41	71	77	185	277	62	69	40	49	29
14	25	60	39	65	74	155	219	71	66	39	43	28
15	23	74	40	70	71	134	172	94	59	36	39	28
16	23	64	72	75	72	108	215	110	59	27	56	27
17	22	56	91	72	79	104	318	151	57	28	31	26
18	23	50	77	65	94	124	322	141	53	34	30	31
19	24	45	65	58	98	196	274	105	59	29	33	29
20	26	40	60	52	92	196	252	137	63	31	33	28
21	31	38	56	50	86	184	220	142	84	33	33	30
22	37	36	52	49	83	183	187	163	89	39	40	50
23	34	35	49	62	90	153	165	254	81	38	27	40
24	32	34	47	76	94	130	203	230	73	38	27	34
25	38	32	46	67	92	115	249	186	65	35	29	31
26	47	31	46	61	87	105	232	167	60	34	30	29
27	51	31	51	57	72	106	187	148	56	33	28	29
28	41	31	49	53	68	189	161	129	56	32	28	30
29	42	45	50	50	---	191	143	120	80	32	28	29
30	44	70	49	50	---	163	128	115	77	33	26	36
31	42	---	46	51	---	145	---	123	---	29	27	---
TOTAL	899	1225	1673	1785	2062	4417	6234	3778	2479	1239	1014	884
MEAN	29.0	40.8	54.0	57.6	73.6	142	208	122	82.6	40.0	32.7	29.5
MAX	51	74	91	87	98	196	329	254	142	71	56	50
MIN	21	28	39	38	47	79	116	62	53	27	26	24
CFSM	.40	.56	.74	.79	1.02	1.96	2.87	1.68	1.14	.55	.45	.41
IN.	.46	.63	.86	.92	1.06	2.27	3.20	1.94	1.27	.64	.52	.45

CAL YR 1982 TOTAL 19511 MEAN 53.5 MAX 148 MIN 21 CFSM .74 IN. 10.01
WTR YR 1983 TOTAL 27689 MEAN 75.9 MAX 329 MIN 21 CFSM 1.05 IN. 14.21

01410000 OSWEGO RIVER AT HARRISVILLE, NJ--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1962-63, 1976 to curent year.

COOPERATION.--Field data and samples for laboratory analyses supplied by New Jersey Department of Environmental Protection, Division of Water Resources. Analyses of fecal coliform and fecal streptococci by the MPN method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)	HARD-NESS (MG/L AS CACO3)
OCT 05...	0940	22	36	4.4	17.0	10.5	E.9	<20	<2	5
JAN 25...	0930	67	57	4.4	5.0	12.4	E1.1	<20	2	5
MAR 29...	0940	196	66	3.9	7.0	10.9	<1.1	<20	<2	5
JUN 02...	0930	142	40	4.3	16.5	8.9	<1.1	20	9	5
JUL 19...	1000	29	39	4.6	28.0	7.8	E1.6	<20	13	5
AUG 23...	0920	28	36	4.0	25.0	8.5	<.9	<20	<2	5

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFIDE TOTAL (MG/L AS S)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 05...	1.1	.47	2.1	1.0	<1.0	--	8.0	3.7	<.10
JAN 25...	1.1	.53	2.1	.70	<1.0	--	9.0	4.6	<.10
MAR 29...	1.0	.52	2.4	.50	<1.0	--	11	4.4	<.10
JUN 02...	1.3	.46	2.3	.40	<1.0	<.5	10	4.0	<.10
JUL 19...	1.3	.50	3.2	1.1	<1.0	--	6.4	4.1	<.10
AUG 23...	1.3	.49	2.9	.80	<1.0	--	6.4	4.0	<.10

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHATE, TOTAL (MG/L AS PO4)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 05...	8.1	32	<.010	<.100	<.050	<.05	--	<.06	1.6
JAN 25...	6.7	32	<.010	<.050	.150	.29	--	.09	3.4
MAR 29...	3.7	37	<.010	.100	.140	.34	.44	.06	7.0
JUN 02...	4.3	39	<.010	.100	.100	.25	.35	--	8.9
JUL 19...	8.8	38	<.010	.200	<.050	.28	.48	.18	3.8
AUG 23...	7.1	26	<.010	.200	<.050	.12	.32	.15	2.4

01410000 OSWEGO RIVER AT HARRISVILLE, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
JUN								
02...	0930	360	1	<10	60	1	30	10

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
JUN								
02...	1400	6	20	<.1	3	<1	30	<1

01410150 EAST BRANCH BASS RIVER NEAR NEW GRETNA, NJ

LOCATION.--Lat 39°37'23", long 74°26'30", Burlington County, Hydrologic Unit 02040301, on left bank upstream of bridge on Stage Road, 0.7 mi west of Lake Absegami, 2.2 mi north of New Gretna, and 5.3 mi upstream from mouth.

DRAINAGE AREA.--8.11 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1969 to 1974. January 1978 to current year.

REVISED RECORDS.--WDR NJ-81-1: 1978-80(P).

GAGE.--Water-stage recorder. Altitude of gage is 5 ft, from topographic map.

REMARKS.--Water-discharge records good. Some regulation by Lake Absegami.

AVERAGE DISCHARGE.--5 years, 16.6 ft³/s, 26.46 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 260 ft³/s July 4, 1978, gage height, 5.87 ft; minimum, 6.9 ft³/s Oct. 24, 1983, gage height, 3.62 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 65 ft³/s and maximum(*):

Date	Time	Discharge (ft³/s)	Gage height (ft)
Apr. 11	0145	*71	5.22

Minimum discharge, 6.9 ft³/s Oct. 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.9	7.7	13	11	12	18	23	28	32	16	10	13
2	7.6	7.7	13	11	12	31	22	28	29	15	9.9	12
3	7.4	7.7	12	11	13	27	34	28	25	15	9.7	10
4	7.4	7.8	11	11	13	20	38	29	26	14	9.7	9.7
5	7.4	8.6	11	11	11	18	29	29	25	13	9.6	9.4
6	7.3	8.5	12	13	11	17	25	27	23	14	9.6	9.3
7	7.3	7.9	13	12	20	20	24	25	21	13	9.8	9.0
8	7.3	7.7	11	11	22	24	25	24	21	13	9.6	8.7
9	7.3	7.6	11	11	16	27	30	24	21	13	9.3	8.6
10	7.5	7.5	10	12	13	27	48	23	19	13	9.4	8.5
11	7.3	7.4	10	18	14	26	62	23	18	12	9.7	8.3
12	7.3	7.5	11	16	17	28	43	23	18	12	14	8.3
13	7.4	14	11	13	14	26	35	22	17	12	15	8.6
14	7.9	17	10	12	13	22	32	22	17	11	12	9.6
15	7.6	13	10	13	14	20	31	23	16	11	11	9.6
16	7.5	12	17	15	15	19	42	32	16	11	10	9.0
17	7.3	10	23	13	17	18	55	39	16	11	10	8.8
18	7.1	9.5	17	12	21	24	43	31	16	10	9.6	8.6
19	7.1	9.2	14	11	21	36	41	25	16	11	9.7	8.4
20	7.1	9.0	14	11	19	32	42	24	19	12	9.4	8.2
21	7.2	8.9	13	11	17	28	38	26	27	12	9.0	8.3
22	7.2	8.8	13	11	17	28	34	33	29	22	8.9	14
23	7.2	8.8	12	13	20	24	32	36	21	16	8.9	13
24	7.1	8.7	12	17	22	22	40	34	17	13	8.9	10
25	9.9	8.5	12	14	18	21	45	30	16	13	8.8	9.3
26	17	8.3	12	13	16	20	37	27	15	12	8.9	9.0
27	14	8.3	12	12	15	21	33	27	14	11	8.9	8.9
28	9.6	8.4	12	12	15	40	31	26	14	11	9.0	8.8
29	8.6	18	12	12	---	35	29	25	20	11	9.8	8.6
30	8.2	20	12	11	---	27	29	25	21	10	10	11
31	8.0	---	12	12	---	24	---	30	---	10	10	---
TOTAL	252.0	294.0	388	386	448	770	1072	848	605	393	308.1	286.5
MEAN	8.13	9.80	12.5	12.5	16.0	24.8	35.7	27.4	20.2	12.7	9.94	9.55
MAX	17	20	23	18	22	40	62	39	32	22	15	14
MIN	7.1	7.4	10	11	11	17	22	22	14	10	8.8	8.2
CFSM	1.00	1.21	1.54	1.54	1.97	3.06	4.40	3.38	2.49	1.57	1.23	1.18
IN.	1.16	1.35	1.78	1.77	2.05	3.53	4.92	3.89	2.78	1.80	1.41	1.31

CAL YR 1982 TOTAL 4311.6 MEAN 11.8 MAX 34 MIN 7.1 CFSM 1.45 IN. 19.78
WTR YR 1983 TOTAL 6050.6 MEAN 16.6 MAX 62 MIN 7.1 CFSM 2.05 IN. 27.75

01410150 EAST BRANCH BASS RIVER NEAR NEW GRETNA, NJ--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976 to current year.

COOPERATION.--Field data and samples for laboratory analyses supplied by New Jersey Department of Environmental Protection, Division of Water Resources. Analyses of fecal coliform and fecal streptococci by the MPN method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, FECAL, EC BROTH (MPN)	STREPTOCOCCI FECAL (MPN)
OCT 05...	1015	7.5	--	4.0	13.5	7.4	E1.5	<20	<2
JAN 25...	1030	14	47	4.4	4.5	12.0	E.6	<20	6
MAR 29...	1040	36	55	4.0	7.5	10.0	<.4	<20	<2
JUN 02...	1040	29	42	4.3	15.5	7.8	<.8	<20	--
JUL 19...	1115	11	33	4.6	21.0	7.5	<1.0	70	24
AUG 11...	1000	9.6	32	--	19.0	6.2	E1.4	<20	2

DATE	HARDNESS (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)
OCT 05...	4	.75	.49	2.4	.70	<1.0	4.0	4.6	<.10
JAN 25...	5	.70	.67	2.5	.60	<1.0	7.0	5.2	<.10
MAR 29...	5	.85	.62	3.1	.50	<1.0	11	5.7	<.10
JUN 02...	4	.65	.52	3.4	.40	<1.0	10	5.6	<.10
JUL 19...	3	.61	.43	3.2	.60	1.0	4.9	5.9	<.10
AUG 11...	5	1.3	.51	3.4	.70	1.0	5.7	5.4	<.10

DATE	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHATE, TOTAL (MG/L AS PO4)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 05...	9.1	30	<.010	.300	<.050	.06	.36	<.06	2.3
JAN 25...	7.0	32	<.010	<.010	.090	.32	--	.06	4.0
MAR 29...	3.9	44	<.010	.100	.110	.48	.58	<.06	9.2
JUN 02...	4.8	46	<.010	<.100	<.050	.45	--	.28	8.8
JUL 19...	9.0	25	<.010	.200	<.500	.28	.48	.18	5.8
AUG 11...	8.9	40	<.010	.100	.080	.30	.40	.18	3.6

01410500 ABSECON CREEK AT ABSECON, NJ

LOCATION.--Lat 39°25'45", long 74°31'16", Atlantic County, Hydrologic Unit 02040302, on right bank 30 ft downstream from Doughty Pond Dam of Atlantic City Water Department, 1.0 mi west of Absecon, and 3.4 mi upstream from mouth.

DRAINAGE AREA.--16.6 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--December 1923 to April 1929 and June 1933 to December 1938 (monthly discharge only, published in WSP 1302; figures of daily discharge published in previous water-supply papers included diversions above station), May 1946 to current year.

GAGE.--Water-stage recorder, concrete control and downstream tidal crest-stage gage. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to May 1946, water-stage recorder and wooden control at same site at datum 0.16 ft lower.

REMARKS.--Water-discharge records fair. Records represent flow at gage only. Diversion from Doughty Pond for municipal supply at Atlantic City (records given herein). Flow regulated by Doughty Pond, capacity, 245,000,000 gal directly above station, and by Kuehule Reservoir, capacity, 250,000,000 gal, 1.5 mi above station.

AVERAGE DISCHARGE.--46 years (water years 1925-28, 1934-38, 1947-83), 26.5 ft³/s, adjusted for diversion.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 295 ft³/s Sept. 6, 1935; no flow several days in many years.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 95 ft³/s Apr. 11; minimum daily, 0.85 ft³/s July 19, 20, Sept. 9, 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.9	3.8	19	5.0	6.8	21	25	33	50	20	5.7	6.8
2	5.0	2.9	17	5.0	8.1	55	17	33	43	18	7.4	5.7
3	1.4	2.9	13	8.8	13	30	45	32	36	17	6.2	3.8
4	1.1	3.3	7.4	6.2	15	19	55	36	37	14	5.7	2.9
5	1.1	3.8	5.7	8.1	9.5	17	33	30	31	14	5.7	2.9
6	1.4	6.2	6.8	17	2.9	14	26	29	30	14	5.7	2.9
7	1.1	10	12	11	25	19	25	30	31	13	5.0	2.9
8	1.1	6.8	10	10	25	31	27	32	30	11	4.4	1.4
9	3.8	3.8	17	7.4	22	36	31	30	28	11	4.4	.85
10	2.3	2.3	3.8	10	8.8	30	78	28	27	8.8	3.8	.85
11	1.1	2.3	3.3	29	19	31	95	28	26	9.5	4.4	1.1
12	1.1	2.3	10	26	24	38	57	28	25	8.8	23	1.4
13	1.1	3.4	3.3	13	15	23	40	29	26	10	19	2.9
14	5.7	10	2.3	8.8	11	17	36	27	22	6.2	12	5.0
15	2.3	15	2.3	17	13	19	35	30	21	6.2	8.1	4.4
16	5.7	8.1	13	17	12	17	74	50	21	6.2	6.8	3.3
17	6.2	6.8	25	9.5	14	17	74	55	21	3.3	5.0	3.8
18	1.4	5.7	17	11	17	32	53	40	20	1.4	5.7	4.4
19	1.4	5.7	13	3.3	16	55	55	32	26	.85	5.7	2.9
20	1.4	5.7	13	7.4	14	31	50	35	35	.85	6.2	2.3
21	3.8	5.0	14	8.1	13	35	43	40	41	2.3	4.4	4.4
22	2.3	5.7	11	7.4	13	32	37	65	33	7.4	2.9	18
23	1.8	6.2	10	12	21	24	36	82	26	4.4	2.9	13
24	1.8	11	10	14	23	19	60	63	24	6.2	2.9	8.8
25	6.2	3.8	11	10	18	26	70	44	19	3.3	2.9	5.0
26	19	2.9	13	7.4	17	15	48	40	17	6.2	3.3	5.0
27	11	7.4	8.8	8.1	5.7	17	41	44	19	6.2	2.3	5.7
28	7.4	1.8	8.8	9.5	8.1	53	37	38	20	5.0	2.9	4.4
29	5.7	43	10	5.7	---	48	36	35	27	5.0	14	4.4
30	6.2	31	11	6.2	---	27	35	36	23	5.0	11	13
31	5.0	---	6.8	8.1	---	23	---	52	---	5.7	8.8	---
TOTAL	118.8	228.6	328.3	327.0	409.9	871	1374	1206	835	250.80	208.2	144.20
MEAN	3.83	7.62	10.6	10.5	14.6	28.1	45.8	38.9	27.8	8.09	6.72	4.81
MAX	19	43	25	29	25	55	95	82	50	20	23	18
MIN	1.1	1.8	2.3	3.3	2.9	14	17	27	17	.85	2.3	.85
(†)	5.2	4.5	4.9	5.2	4.9	4.8	4.9	5.9	7.7	12.6	12.5	9.2

CAL YR 1982 TOTAL 3172.15 MEAN 8.69 MAX 44 MIN .85 † 4.9
WTR YR 1983 TOTAL 6301.80 MEAN 17.3 MAX 95 MIN .85 † 6.9

† Diversion, in cubic feet per second, above station from Doughty Pond for municipal supply by Atlantic City.

01410784 GREAT EGG HARBOR RIVER NEAR SICKLERVILLE, NJ

LOCATION.--Lat 39°44'02", long 74°57'05", Camden County, Hydrologic Unit 02040302, at bridge on Sicklerville-New Freedom Road (Spur 536), 1.5 mi northeast of Sicklerville, and 2.7 mi upstream of New Brooklyn Lake dam.

DRAINAGE AREA.--15.1 mi².

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1972 to current year.

COOPERATION.--Analyses of fecal coliform and fecal streptococci by the MPN method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
JAN 19...	1230	10	104	6.4	1.5	9.4	66	3.2	7	5
APR 07...	1000	23	80	5.8	10.5	7.6	67	1.4	11	7
JUN 14...	1230	8.9	110	6.5	20.0	6.4	--	1.4	31	<200
JUL 28...	1245	--	134	6.7	21.5	6.1	68	1.0	230	7900
AUG 09...	1000	--	175	6.6	22.0	2.7	31	1.1	200	54000
SEP 26...	1000	--	145	6.5	11.0	7.0	63	1.0	49	130

DATE	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFIDE TOTAL (MG/L AS S)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
JAN 19...	18	4.4	1.7	11	2.4	5.0	--	18	11	<.10
APR 07...	17	4.4	1.5	7.6	1.7	3.0	--	18	9.7	<.10
JUN 14...	21	5.3	1.9	11	2.0	9.0	--	14	15	.10
JUL 28...	27	6.9	2.4	14	4.1	21	--	13	16	<.10
AUG 09...	27	7.0	2.3	19	5.2	27	--	13	18	<.10
SEP 26...	28	7.2	2.4	14	3.5	15	<.5	16	14	<.10

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHATE, TOTAL (MG/L AS PO4)	CARBON, ORGANIC TOTAL (MG/L AS C)
JAN 19...	7.7	66	.010	1.30	.630	2.0	3.3	1.30	8.2
APR 07...	4.1	69	.020	.800	.390	1.3	2.1	.88	16
JUN 14...	6.2	80	.010	1.50	<.050	.82	2.3	1.90	9.6
JUL 28...	1.6	78	<.010	2.20	.040	.59	2.8	2.91	5.7
AUG 09...	2.5	130	.020	2.80	.110	E.50	--	3.07	6.3
SEP 26...	6.8	88	<.010	3.30	<.050	.17	3.5	1.90	4.9

01410784 GREAT EGG HARBOR RIVER NEAR SICKLERVILLE, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYL-LIUM, TOTAL RECOV-ERABLE (UG/L AS BE)	BORON, TOTAL RECOV-ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)
SEP								
26...	1000	40	4	<10	140	<1	20	3

DATE	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	SELE-NIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
SEP								
26...	160	11	<10	<.1	<1	<1	30	3

01410820 GREAT EGG HARBOR RIVER NEAR BLUE ANCHOR, NJ

LOCATION.--39°40'09", long 74°54'49", Camden County, Hydrologic Unit 02040302, downstream side of bridge on Broad Lane Road, 1.9 mi southwest of Blue Anchor, and 2.1 mi downstream from confluence of Fourmile Branch.

DRAINAGE AREA.--37.3 mi².

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1972 to current year.

COOPERATION.--Analyses of fecal coliform and fecal streptococci by the MPN method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
JAN 19...	1045	79	6.1	1.0	14.0	97	.9	2	2
APR 07...	1130	63	5.2	11.5	8.5	77	1.0	8	11
JUN 14...	1100	83	6.5	19.0	6.7	--	2.0	170	1400
JUL 28...	1100	81	6.7	19.5	8.0	86	.5	50	1300
AUG 09...	0845	68	6.4	20.5	7.1	79	1.0	70	2400
SEP 26...	0830	93	6.4	12.0	8.7	80	.6	70	170

DATE	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
JAN 19...	16	3.6	1.8	7.3	1.7	4.0	10	9.1	<.10
APR 07...	15	3.5	1.4	5.5	1.4	2.0	16	8.7	<.10
JUN 14...	16	3.7	1.7	8.0	1.7	7.0	11	9.7	.10
JUL 28...	16	3.3	1.8	8.1	2.0	10	9.3	10	<.10
AUG 09...	13	2.6	1.5	5.9	1.8	10	6.2	7.3	<.10
SEP 26...	18	4.1	1.9	7.1	1.9	9.0	13	9.4	<.10

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHATE, TOTAL (MG/L AS PO4)	CARBON, ORGANIC TOTAL (MG/L AS C)
JAN 19...	7.3	54	<.010	1.70	.230	.44	2.1	.65	7.1
APR 07...	3.9	62	<.010	.700	.150	.72	1.4	.45	15
JUN 14...	6.6	71	.040	1.20	.400	1.1	2.4	1.50	9.1
JUL 28...	4.2	45	.050	1.60	.110	.29	1.9	.67	3.6
AUG 09...	3.3	68	<.010	1.20	<.050	E.26	--	.55	2.8
SEP 26...	5.8	61	.010	1.80	<.050	.27	2.1	.83	3.4

01411000 GREAT EGG HARBOR RIVER AT FOLSOM, NJ

LOCATION.--Lat 39°35'42", long 74°51'06", Atlantic County, Hydrologic Unit 02040302, on left bank 25 ft upstream from bridge on State Highway 54, 1.0 mi south of Folsom, and 2.0 mi upstream from Pennypot Stream.

DRAINAGE AREA.--57.1 mi^2, revised.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1925 to current year. Prior to October 1947, published as "Great Egg River at Folsom".

REVISED RECORDS.--WSP 1432: 1928(M), 1933.

GAGE.--Water-stage recorder. Concrete control since Nov. 26, 1934. Datum of gage is 53.32 ft National Geodetic Vertical Datum of 1929. Prior to Mar. 6, 1941, water-stage recorder at site 100 ft downstream at same datum. Mar. 6 to Oct. 5, 1941, nonrecording gage at site 145 ft downstream at datum 0.25 ft higher.

REMARKS.--Water-discharge records good.

AVERAGE DISCHARGE.--58 years, 86.4 ft^3/s, 20.55 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,440 ft^3/s Sept. 3, 1940, gage height, 9.09 ft; minimum, 15 ft^3/s Sept. 6, 1957, Aug. 28-30, 1966; minimum gage height, 3.42 ft Aug. 28-30, 1966.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 411 ft^3/s Apr. 18, gage height, 5.81 ft; minimum, 21 ft^3/s Sept. 9, 11, 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	41	45	92	64	64	79	167	145	145	101	40	29
2	39	43	98	62	63	88	138	130	129	99	40	29
3	37	42	94	61	66	98	145	121	123	96	38	27
4	36	42	87	60	73	104	179	122	119	85	38	27
5	35	45	77	59	73	99	225	136	116	76	38	26
6	33	47	75	61	69	89	206	141	113	73	38	25
7	33	47	81	62	73	89	174	127	111	70	37	25
8	33	45	76	62	81	103	146	115	103	67	35	23
9	33	44	70	60	83	123	132	107	98	65	34	22
10	32	43	65	61	79	167	161	101	91	63	33	22
11	32	42	61	78	74	196	252	98	85	61	34	22
12	32	42	62	92	70	198	298	94	82	59	50	22
13	32	59	59	101	70	191	268	92	78	58	58	36
14	35	70	57	98	69	176	242	91	74	56	55	43
15	35	78	56	90	68	150	221	90	72	54	49	39
16	33	79	65	84	69	126	273	97	69	53	44	36
17	33	73	87	80	73	109	336	135	68	52	40	33
18	33	66	102	75	80	105	406	186	75	53	36	32
19	33	61	106	70	86	156	369	191	85	51	35	30
20	33	59	97	65	91	249	305	167	89	50	33	28
21	38	57	86	63	93	288	265	151	145	50	32	28
22	39	55	77	61	94	309	233	150	289	51	30	57
23	37	54	72	65	96	302	202	181	289	48	29	61
24	36	53	70	73	99	257	197	238	218	47	28	55
25	39	52	68	75	102	206	249	214	162	49	29	47
26	51	51	65	74	100	164	312	191	124	48	28	40
27	59	51	65	71	92	137	293	172	100	46	26	37
28	59	50	64	68	83	163	247	154	87	45	26	35
29	54	70	65	65	---	217	203	152	88	43	29	33
30	50	83	66	64	---	234	170	154	97	42	30	34
31	48	---	65	64	---	202	---	158	---	41	29	---
TOTAL	1193	1648	2330	2188	2233	5174	7014	4401	3524	1852	1121	1003
MEAN	38.5	54.9	75.2	70.6	79.8	167	234	142	117	59.7	36.2	33.4
MAX	59	83	106	101	102	309	406	238	289	101	58	61
MIN	32	42	56	59	63	79	132	90	68	41	26	22
CFSM	.67	.96	1.32	1.24	1.40	2.92	4.10	2.49	2.05	1.05	.63	.58
IN.	.78	1.07	1.52	1.43	1.45	3.37	4.57	2.87	2.30	1.21	.73	.65

CAL YR 1982 TOTAL 25865 MEAN 70.9 MAX 229 MIN 29 CFSM 1.24 IN. 16.85
WTR YR 1983 TOTAL 33681 MEAN 92.3 MAX 406 MIN 22 CFSM 1.62 IN. 21.94

01411110 GREAT EGG HARBOR RIVER AT WEYMOUTH, NJ

LOCATION.--Lat 39°30'50", long 74°46'47", Atlantic County, Hydrologic Unit 02040302, at bridge on U.S. Route 322 in Weymouth, 0.5 mi upstream from Deep Run, and 20.9 mi upstream from mouth.

DRAINAGE AREA.--154 mi^2.

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1975 to current year.

COOPERATION.--Analyses of fecal coliform and fecal streptococci by the MPN method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
JAN 20...	1000	125	64	4.9	.0	13.0	87	.4	9	170
APR 06...	0930	475	63	4.5	11.0	8.6	77	1.0	49	49
JUN 13...	1130	184	56	5.9	21.0	7.2	--	.9	49	79
JUL 28...	1115	89	57	6.3	21.0	8.1	91	.7	<2	230
AUG 11...	1045	--	59	6.4	22.0	8.1	93	.5	<20	90
SEP 27...	0910	--	64	6.3	13.0	10.0	94	.1	7	7000

DATE	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFIDE TOTAL (MG/L AS S)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
JAN 20...	12	2.3	1.4	4.9	1.1	1.0	--	10	8.0	<.10
APR 06...	10	2.2	1.1	3.6	.90	<1.0	--	15	6.7	<.10
JUN 13...	11	2.3	1.3	5.2	1.0	2.0	--	12	8.2	<.10
JUL 28...	10	2.0	1.1	4.6	1.1	3.0	--	8.2	8.1	<.10
AUG 11...	9	1.8	1.1	4.7	1.1	3.0	--	6.8	7.7	<.10
SEP 27...	12	2.7	1.3	5.0	1.3	7.0	<.5	9.4	8.3	<.10

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHATE, TOTAL (MG/L AS PO4)	CARBON, ORGANIC TOTAL (MG/L AS C)
JAN 20...	7.3	48	<.010	.700	.080	.35	1.1	.15	5.7
APR 06...	2.9	50	<.010	.100	.100	.39	.49	.18	11
JUN 13...	5.9	50	<.010	.400	.110	1.4	1.8	1.50	13
JUL 28...	6.0	29	<.010	.600	.090	.11	.71	.40	5.2
AUG 11...	5.2	38	.010	.500	.150	.32	.82	.18	3.9
SEP 27...	6.8	48	<.010	.700	.050	.14	.84	.28	2.7

01411110 GREAT EGG HARBOR RIVER AT WEYMOUTH, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
SEP								
27...	0910	90	5	<10	40	<1	10	27

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
SEP								
27...	450	7	10	<.1	8	<1	180	6

01411300 TUCKAHOE RIVER AT HEAD OF RIVER, NJ

LOCATION.--Lat 39°18'25", long 74°49'15", Cape May County, Hydrologic Unit 02040302, on right bank at highway bridge on State Route 49, 0.2 mi upstream from McNeals Branch, 0.4 mi southeast of Head of River, and 3.7 mi west of Tuckahoe.

DRAINAGE AREA.--30.8 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--December 1969 to current year.

REVISED RECORDS.--WDR NJ-78-1: 1975(M), 1976(M).

GAGE.--Water-stage recorder, wooden control, and downstream tidal crest-stage gage. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records fair. Occasional regulation by ponds above station.

AVERAGE DISCHARGE.--13 years, 45.2 ft³/s, 19.92 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 385 ft³/s Mar. 7, 1979, elevation, 6.23 ft; minimum daily, 1.3 ft³/s Sept. 3, 13, 1980.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 336 ft³/s Apr. 17, elevation, 5.87 ft; minimum daily discharge, 15 ft³/s Sept. 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	25	56	22	28	47	114	99	132	48	18	23
2	13	29	45	20	27	77	105	92	143	44	19	23
3	13	28	37	19	31	73	138	87	128	40	18	20
4	13	27	31	18	29	58	174	90	112	41	18	19
5	13	27	27	18	26	51	153	95	101	39	18	18
6	12	27	30	23	25	46	129	89	89	29	18	18
7	12	27	40	22	53	50	113	80	80	28	18	17
8	13	25	33	19	70	66	110	75	74	26	17	17
9	13	25	26	18	55	81	117	70	70	25	17	16
10	12	26	24	27	45	77	187	67	64	25	17	16
11	12	25	23	70	45	82	293	63	56	24	18	16
12	12	25	28	73	43	83	264	61	51	22	40	15
13	13	31	27	49	37	80	189	58	46	22	48	17
14	13	54	23	38	36	66	145	57	41	22	34	24
15	13	43	22	39	40	58	120	60	37	22	25	24
16	14	41	38	43	44	52	223	102	33	22	22	20
17	14	38	67	36	51	50	325	158	31	21	21	19
18	13	36	58	31	61	89	285	150	31	21	20	17
19	14	34	44	27	64	217	212	124	28	21	20	17
20	14	33	37	25	59	210	192	106	31	21	20	16
21	15	31	29	23	53	182	176	112	65	22	19	17
22	15	30	26	24	49	199	156	198	80	25	18	33
23	14	30	25	33	58	174	136	220	74	24	18	36
24	14	29	24	46	89	138	171	206	67	22	18	25
25	23	29	23	40	74	116	233	182	59	21	17	22
26	36	28	23	35	59	102	210	146	53	21	17	21
27	31	25	22	32	49	99	173	134	45	21	16	22
28	29	21	22	33	44	181	143	131	42	20	16	23
29	27	49	23	31	---	195	121	119	71	20	23	24
30	26	79	24	29	---	164	108	111	58	20	21	32
31	25	---	23	30	---	133	---	114	---	19	19	---
TOTAL	515	977	980	993	1344	3296	5215	3456	1992	798	648	627
MEAN	16.6	32.6	31.6	32.0	48.0	106	174	111	66.4	25.7	20.9	20.9
MAX	36	79	67	73	89	217	325	220	143	48	48	36
MIN	12	21	22	18	25	46	105	57	28	19	16	15

CAL YR 1982 TOTAL 11820 MEAN 32.4 MAX 109 MIN 11
WTR YR 1983 TOTAL 20841 MEAN 57.1 MAX 325 MIN 12

As the number of streams on which streamflow information is likely to be desired far exceeds the number of stream-gaging stations feasible to operate at one time, the Geological Survey collects limited streamflow data at sites other than stream-gaging stations. When limited streamflow data are collected on a systematic basis over a period of years for use in hydrologic analyses, the site at which the data are collected is called a partial-record station. Data collected at these partial-record stations are usable in low-flow or floodflow analyses, depending on the type of data collected. In addition, discharge measurements are made at other sites not included in the partial-record program. These measurements are generally made in times of drought or flood to give better areal coverage to those events. Those measurements and others collected for some special reason are called measurements at miscellaneous sites.

Records collected at partial-record stations are presented in two tables. The first is a table of discharge measurements at low-flow partial-record stations, and the second is a table of annual maximum stage and discharge at crest-stage stations. Discharge measurements made at miscellaneous sites for both low flow and high flow are given in a third table.

Low-flow partial-record stations

Measurements of streamflow in New Jersey made at low-flow partial-record stations are given in the following table. Most of these measurements were made during periods of base flow when streamflow is primarily from ground-water storage. These measurements, when correlated with the simultaneous discharge of a nearby stream where continuous records are available, will give a picture of the low-flow potentiality of a stream. The column headed "Period of record" shows the water years in which measurements were made at the same, or practically the same, site.

Discharge measurements made at low-flow partial-record stations during water year 1983

Station number	Station name	Location	Drainage area (mi²)	Period of record	Measurements	
					Date	Discharge (ft³/s)
		Hudson River basin				
01367620	Wallkill River at outflow of Lake Mohawk at Sparta, NJ	Lat 41°01'59", long 74°37'36", Sussex County, at bridge on West Shore Trail, at Sparta, 200 ft downstream from outflow of Lake Mohawk, and 1.2 mi southwest of Sparta Station.	4.38	1979-83	6-16-83 8-16-83	2.2 1.9
01367700	Wallkill River at Franklin, NJ	Lat 41°06'43", long 74°35'21", Sussex County, at bridge 120 ft downstream from dam at outlet of Franklin Pond in Franklin, and 0.8 mi upstream from Wildcat Brook.	32.0	1959-64, 1982-83	1-04-83	19
01368950	Black Creek near Vernon, NJ	Lat 41°13'21", long 74°28'33", Sussex County, at bridge on Maple Grange Road, 0.6 mi upstream of confluence with Wawayanda Creek, 0.7 mi northwest of Maple Grange, and 1.7 mi northeast of Vernon.	17.3	1980-83	1-04-83 8-16-83	11 6.6
		Passaic River basin				
*01378615	Wolf Creek at Ridgefield, NJ	Lat 40°49'45", long 74°00'14", Bergen County, at bridge on Clark Avenue in Ridgefield, 0.4 mi upstream from mouth, 1.3 mi southeast of New Jersey Turnpike interchange 18, and 2.7 mi southwest of western toll plaza of George Washington Bridge.	1.18	1964-1972, 1978, 1983	10-04-82	0.41
01379150	Harrisons Brook at Liberty Corner, NJ	Lat 40°40'27", long 74°34'14", Somerset County, at bridge on Lyons Road, 0.8 mi northeast of Liberty Corner, and 1.6 mi upstream from mouth.	3.74	1964-1967, 1983	8-02-83	0.65
01379300	Passaic River at Stirling, NJ	Lat 40°39'57", long 74°28'57, Morris County, at bridge on Plainfield Road, 0.2 mi south of Passaic Valley Road, 0.8 mi southeast of center of Stirling, and 4.1 mi below Dead River.	84.1	1968-73, 1983	8-02-83	20
01379750	Rockaway River at Dover, NJ	Lat 40°54'12, long 74°34'36", Morris County, 500 ft downstream from Main Street, at Carpenter Plant, 0.5 mi upstream from Green Pond Brook, and 1.4 mi northwest of Dover.	30.8	1963-66, 1983	9-29-83	9.2
01381200	Rockaway River at Pine Brook, NJ	Lat 40°51'42, long 74°20'53", Morris County, at bridge on U.S. Route 46, 0.9 mi west of Pine Brook, and 1.1 mi upstream of Whippany River.	136	1963-73, 1979-81, 1983	1-06-83	10
01381800	Whippany River near Pine Brook, NJ	Lat 40°50'42", long 74°20'51", Morris County, at bridge on Edwards Road, 0.3 mi upstream from mouth, and 1.3 mi southwest of Pine Brook.	68.5	1963-68, 1970, 1979-81, 1983	1-06-83 8-04-83	118 51
01382000	Passaic River at Two Bridges, NJ	Lat 40°53'50", long 74°16'23", Essex County, at bridge on Two Bridges Road, just upstream of confluence with Pompton River, 0.3 mi northeast of Two Bridges, and 2.6 mi northwest of Little Falls.	361	1963-68, 1983	8-03-83	149

Discharge measurements made at low-flow partial-record stations during water year 1983--Continued

Station number	Station name	Location	Drainage area (mi²)	Period of record	Measurements Date	Measurements Discharge (ft³/s)
		Passaic River basin--Continued				
01387520	Stag Brook near Mahwah, NJ	Lat 41°05'45", long 74°10'25", Bergen County, at bridge 300 ft upstream from mouth, and 1.5 mi west of Mahwah.	1.29	1963-70, 1972, 1982-83	10-13-82	0
01387600	Darlington Brook at Darlington, NJ	Lat 41°04'46", long 74°11'02", Bergen County, at bridge on Valley Road, (U.S. Route 202), at Darlington, 0.3 mi upstream from mouth, and 2.6 mi northwest of Ramsey.	3.57	1963-67, 1982-83	10-13-82	0.93
01387670	Ramapo River near Darlington, NJ	Lat 41°03'57", long 74°12'31", Bergen County, at bridge on Bear Swamp Road, 250 ft upstream from Bear Swamp Brook, 1.6 mi southwest of Darlington, and 3.0 mi northeast of Oakland.	132	1963-66, 1982-83	10-13-82	24
01387700	Bear Swamp Brook near Oakland, NJ	Lat 41°03'59", long 74°12'35", Bergen County, at bridge, 0.1 mi upstream from mouth, and 2.9 mi northeast of Oakland.	3.29	1963-67, 1982-83	10-13-82	.24
*01387880	Pond Brook at Oakland, NJ	Lat 41°01'45", long 74°14'13", Bergen County, at bridge on U.S. Route 202, 0.3 mi upstream from mouth.	7.52	1963-72, 1976-77, 1982-83	10-05-82 10-13-82	5.5 1.8
01389100	Singac Brook at Singac, NJ	Lat 40°53'37", long 74°15'57", Passaic County, at bridge on Fairfield Road, between U.S. Routes 80 and 46, 60 ft upstream from mouth, 1.2 mi northwest of Singac, and 1.8 mi northwest of Little Falls.	11.1	1968-67, 1983	8-03-83	18
01389600	Peckman River at West Paterson, NJ	Lat 40°53'32", long 74°12'43", Passaic County, at bridge on McBride Avenue, 0.2 mi upstream from mouth, 0.7 mi west of West Paterson, and 3.2 mi southwest of Paterson.	10.1	1963-67, 1983	8-03-83	9.4
01389790	Molly Ann Brook at Paterson, NJ	Lat 40°54'52", long 74°11'26", Passaic County, at bridge on Totowa Avenue, 0.1 mi upstream from mouth, and 1.8 mi west of Paterson.	7.73	1963-72, 1983	8-03-83	1.8
01389850	Goffle Brook at Hawthorne, NJ	Lat 40°56'20", long 74°09'48", Passaic County, at bridge on Wagaraw Road, 0.1 mi upstream from mouth, 1.1 mi southwest of Hawthorne, and 1.9 mi north of Paterson.	8.77	1963-67, 1983	8-03-83	2.4
01390450	Saddle River at Upper Saddle River, NJ	Lat 41°03'32", long 74°05'44", Bergen County, at bridge on Route 96 (Lake Street) in Upper Saddle River, 1.3 mi downstream from Pine Brook and 1.7 mi downstream from New York-New Jersey State Line.	10.9	1963-72, 1975-78, 1983	10-04-82	2.9
		Rahway River basin				
01396030	South Branch Rahway River at Colonia, NJ	Lat 40°34'57", long 74°18'04", Middlesex County, at bridge on Dover Road in Colonia, 0.7 mi northeast of Iselin, and 3.5 mi northeast of Metuchen.	9.41	1979-83	8-16-83	1.8
		Raritan River basin				
01396090	South Branch Raritan River at outlet of Budd Lake, NJ	Lat 40°51'38", long 74°45'38", Morris County, at bridge on Smithtown Road, 200 ft northwest of U.S. Route 46, and 0.5 mi downstream from Budd Lake Dam.	5.03	1963, 1973-77, 1980-83	a5-20-82 a12-17-82	3.5 12
01396280	South Branch Raritan River at Middle Valley, NJ	Lat 40°45'40", long 74°49'18", Morris County, at bridge on Middle Valley Road, 6.9 mi downstream from Drakes Brook.	47.7	1963-67, 1973, 1975, 1982-83	1-05-83	39
01397290	Assiscong Creek at Bartles Corners, NJ	Lat 40°32'23", long 74°50'52" Hunterdon County, at bridge on River Road, 0.3 mi upstream from mouth, 1.5 mi north of Flemington, and 2.8 mi west of Three Bridges.	2.98	1981-83	6-16-83 8-17-83	1.4 .09

Discharge measurements made at low-flow partial-record stations during water year 1983--Continued

Station number	Station name	Location	Drainage area (mi²)	Period of record	Measurements	
					Date	Discharge (ft³/s)
		Raritan River basin--Continued				
01397800	Neshanic River near Flemington, NJ	Lat 40°28'46", long 74°51'29" Hunterdon County, at bridge on Kuhl Road, 200 ft downstream from confluence of First Neshanic River and Second Neshanic River, 1.4 mi south of Flemington, and 2.1 mi west of Reaville.	11.4	1981-83	6-16-83 8-17-83	2.4 0
01397900	Third Neshanic River near Ringoes, NJ	Lat 40°27'31", long 74°52'05", Hunterdon County, at bridge on Eitts Road, 2.0 mi upstream from mouth, 2.1 mi north of Ringoes, and 3.0 mi southwest of Reaville.	9.24	1981-83	6-16-83 8-17-83	4.9 .50
01398052	Back Brook near Reaville, NJ	Lat 40°27'32", long 74°49'24", Hunterdon County, at bridge on Manners Road, 0.6 mi upstream from mouth, 0.8 mi northwest of Wertsville, and 1.5 mi southeast of Reaville.	11.4	1981-83	6-16-83 8-17-83	3.3 0
01398075	Pleasant Run at Centerville, NJ	Lat 40°32'17", long 74°45'17", Hunterdon County, at bridge on Old York Road in Centerville, 2.4 mi northwest of Neshanic Station, 2.5 mi upstream from mouth, and 2.7 mi northwest of Three Bridges.	8.11	1982-83	6-16-83 8-17-83	3.0 .16
01398260	North Branch Raritan River near Chester, NJ	Lat 40°46'16", long 74°37'34", Morris County, at bridge on State Route 24, 0.8 mi upstream from Burnett Brook, and 3.8 mi east of Chester.	7.57	1964-67, 1980-83	1-05-83	3.5
01401400	Heathcote Brook at Kingston, NJ	Lat 40°22'10", long 74°36'59", Middlesex County, at bridge on Mapleton Road, at former Penn Central railroad bridge, 0.3 mi south of Kingston, and 0.4 mi upstream from mouth.	9.00	1979-83	6-16-83 8-18-83	2.1 1.7
01403330	Bound Brook at South Plainfield, NJ	Lat 40°34'43", long 74°24'45", Middlesex County, at bridge on Hamilton Road in South Plainfield, 0.5 mi upstream from Cedar Brook, and 1.9 mi east of New Market.	9.55	1979-83	8-16-83	4.3
01404060	Ambrose Brook at Middlesex, NJ	Lat 40°34'03", long 74°31'02", Middlesex County, at dam, 900 ft upstream from bridge on State Route 18 in Middlesex, and 0.7 mi upstream from mouth.	13.9	1979-83	8-16-83	2.7
01404180	Mill Brook at Highland Park, NJ	Lat 40°30'23", long 74°25'51", Middlesex County, at bridge on Harrison Street in Highland Park, 0.7 mi upstream from mouth, and 0.9 mi northeast of New Brunswick.	1.41	1979-83	8-16-83	.55
01405170	Milford Brook at Englishtown, NJ	Lat 40°18'02", long 74°20'07", Monmouth County, at bridge on Conmack Road, 0.6 mi upstream from McGellairds Brook, 1.2 mi east of Englishtown, and 2.0 mi southwest of Gordons Corner.	4.86	1982	[a]9-09-82	1.1
01405180	McGellairds Brook at Englishtown, NJ	Lat 40°18'06", long 74°21'26", Monmouth County, at bridge on on Wilson Avenue in Englishtown, 0.8 mi downstream from Milford Brook, 1.0 mi southeast of Monmouth-Middlesex County line, and 5.5 mi northwest of Freehold.	14.9	1982	[a]9-09-82	2.0
01405210	Pine Brook at Clarks Mills, NJ	Lat 40°18'58", long 74°19'51", Monmouth County, at bridge on Winthrop Drive, 1.3 mi east of Clarks Mills, 1.9 mi upstream of Matchaponix Brook, and 4.8 mi northwest of Freehold.	4.66	1982	[a]9-09-82	1.0
01405240	Matchaponix Brook near Englishtown, NJ	Lat 40°19'21", long 74°21'35", Middlesex County, at bridge on Union Hill Road, 1.7 mi north 2.8 mi northwest of Gordons Corner.	29.1	1979-83	8-17-83	20

Discharge measurements made at low-flow partial-record stations during water year 1983--Continued

Station number	Station name	Location	Drainage area (mi²)	Period of record	Measurements	
					Date	Discharge (ft³/s)
		Raritan River basin--Continued				
01405285	Barclay Brook near Englishtown, NJ	Lat 40°20'53", long 74°21'27", Middlesex County, at bridge on State Route 527 (Old Bridge-Englishtown Road), 0.6 mi south of Redshaw Corner, 0.9 mi upstream from mouth, and 3.5 mi north of Englishtown.	4.94	1979-83	8-16-83	.55
01405335	Manalapan Brook near Manalapan, NJ	Lat 40°16'45", long 74°22'53", Monmouth County, at bridge on South Main Street, 1.8 mi northeast of Manalapan, 1.8 mi southwest of Englishtown, and 5.6 mi southeast of Jamesburg.	16.0	1979-83	8-17-83	9.7
01406000	Deep Run near Browntown, NJ	Lat 40°22'30", long 74°18'14", Middlesex County, upstream from highway bridge, 0.7 mi downstream from the Middlesex-Monmouth County line, and 1.8 mi south of Browntown.	8.07	1933-40‡ 1982	a9-10-82	1.2
		Mullica River basin				
*01409375	Mullica River near Atco, NJ	Lat 39°47'08", long 74°51'38", Camden County, 50 ft downstream from Jackson-Medford Road and 1.8 mi northeast of Pennsylvania-Reading Seashore Lines railroad and Atco Street in Atco.	3.22	1975-83	6-17-83 8-23-83	3.8 .68
01409390	Mullica River at Atsion, NJ	Lat 39°44'19", long 74°43'20", Burlington County, at abandoned bridge on Central Railroad of New Jersey in Atsion, 500 ft downstream from Wesickaman Creek, and 0.3 mi southeast of Atsion.	33.1	1975-83	6-16-83 8-17-83	42 15
01409410	Albertson Brook near Hammonton, NJ	Lat 39°41'41", long 74°45'21", Atlantic County, at bridge on U.S. Route 206, 3.1 mi downstream from confluence of Pump Branch and Blue Anchor Brook, 3.5 mi south of Atsion, and 5.2 mi northeast of Hammonton.	19.3	1975-83	6-17-83 8-23-83	31 18
01409411	Nescochague Creek at Pleasant Mills, NJ	Lat 39°38'28", long 74°39'43", Atlantic County, at bridge on Sand Road in Pleasant Mills, 0.2 mi upstream from Mullica River, and 0.6 mi west of Batsto.	43.7	1975-83	6-17-83 8-17-83	18 2.3
01409460	Springers Brook near Atsion, NJ	Lat 39°44'26", long 74°41'02", Burlington County, at site 110 ft upstream from unnamed left-bank tributary, 700 ft downstream from Deep Run, and 2.8 mi east of Atsion.	21.2	1975-77, 1980-83	6-16-83 8-23-83	18 2.3
		Great Egg Harbor River basin				
01411053	Hospitality Branch at Berryland, NJ	Lat 39°36'31", long 74°54'34", Gloucester County, at bridge on Piney Hollow Road, 0.3 mi southwest of Berryland, 1.2 mi upstream of Oak Branch and 3.4 mi west of Folsom.	20.0	1976-83	6-17-83 8-17-83	25 12
01411140	Deep Run at Weymouth, NJ	Lat 39°30'26", long 74°46'56", Atlantic County, at bridge on State Highway 559, 0.3 mi upstream of mouth, and 0.5 mi southwest of Weymouth.	20.0	1976-83	5-12-83 8-17-83	26 10

* Also a crest-stage partial-record station.
a Not previously publish.
‡ Operated as a continuous-record gaging station.

CREST-STAGE PARTIAL-RECORD STATIONS

The following table contains annual maximum discharges for crest-stage stations. A crest-stage gage is a device which will register the peak stage occurring between inspections of the gage. A stage-discharge relation for each gage is developed from discharge measurements made by indirect measurements of peak flow or by current meter. The date of the maximum discharge is not always certain but is usually determined by comparison with nearby continuous-record stations, weather records, or local inquiry. Only the maximum discharge for each water year is given. Information on some lower stages may have been obtained, and discharge measurements may have been made for purposes of establishing the stage-discharge relation, but these are not published herein. The years given in the period of record represent water years for which the annual maximum has been determined. The gage heights are heights on the upstream side of the bridge, above the dam or at the discontinued continuous-record gaging station unless otherwise noted.

ANNUAL MAXIMUM DISCHARGE AT CREST-STAGE PARTIAL-RECORD STATIONS

Station No.	Station name	Location	Drainage area (mi²)	Period of record	Annual maximum Date	Annual maximum Gage height (feet)	Annual maximum Discharge (ft³/s)
		Hackensack River basin					
*01377475	Musquapsink Brook near Westwood, NJ	Lat 40°59'41", long 74°03'42", Bergen County, at bridge on Pascack Road in Washington Borough, 1.5 mi west of Westwood, and 5.3 mi above mouth. Datum of gage before 1973 was 69.67 ft National Geodetic Vertical Datum of 1929.	2.12, revised	1965-83	3-21-83	bh0.84	†
01377490	Musquapsink Brook at Westwood, NJ	Lat 40°59'11", long 74°02'03", Bergen County, at footbridge at Bogert Pond, 8 ft upstream from dam near intersection of Mill Street and First Avenue in Westwood. Datum of gage is 47.67 ft Natioral Geodetic Vertical Datum of 1929.	6.53	1966-83	4-16-83	1.63	300
*01378385	Tenakill Brook at Closter, NJ	Lat 40°58'29", long 73°58'06, Bergen County, at bridge on High Street in Closter, 0.7 mi upstream from mouth. Datum of gage is 23.85 ft National Geodetic Vertical Datum of 1929.	8.56	1965-83	4-16-83	b3.03	495
*01378590	Metzler Brook at Englewood, NJ	Lat 40°54'29", long 73°59'13", revised, Bergen County, at bridge on Lantana Avenue in Englewood, and 1.6 mi upstream from mouth. Datum of gage is 43.10 ft National Geodetic Vertical Datum of 1929.	1.54	1965-83	4-16-83	b2.09	175
*01378615	Wolf Creek at Ridgefield, NJ	Lat 40°49'45", Long 74°00'14", Bergen County, at bridge on Clark Avenue in Ridgefield and 0.9 mi upstream from mouth. Datum of gage is 12.1 ft National Geodetic Vertical Datum of 1929.	1.18	1965-83	9-30-83	b6.41	595
		Passaic River basin					
01378690	Passaic River near Bernardsville, NJ	Lat 40°44'03", long 74°32'26", Somerset County, at bridge on U.S. Route 202, 1.8 mi northeast of Bernardsville, and 3.0 mi upstream from Great Brook. Datum of gage is 238.07 ft National Geodetic Vertical Datum of 1929.	8.83	1968-76‡, 1977-83	4-16-83	b13.93	790
01379845	Rockaway River at Warren Street, at Dover, NJ	Lat 40°53'08", long 74°33'36", Morris County, on left bank, 100 ft, upstream from bridge on Warren Street, in Dover, 4.0 mi west of Denville and 6 mi southeast of Lake Hopatcong.	47.5	1981-83	4-16-83	5.78	1,340
01387880	Pond Brook at Oakland, NJ	Lat 41°01'36", long 74°14'04", Bergen County, at bridge on NJ Route 208 in Oakland, 0.2 mi upstream from former site at Franklin Avenue (prior to October 1975), 0.6 mi upstream from mouth, and 1.5 mi northwest of Franklin Lakes. Datum of gage is 276.97 ft National Geodetic Vertical Datum of 1929.	6.76	1968-71, 1976-83	4-16-83	2.19	340

CREST-STAGE PARTIAL-RECORD STATIONS

ANNUAL MAXIMUM DISCHARGE AT CREST-STAGE PARTIAL-RECORD STATIONS--Continued

Station No.	Station name	Location	Drainage area (mi^2)	Period of record	Annual maximum Date	Annual maximum Gage height (feet)	Annual maximum Discharge (ft^3/s)
		Passaic River basin--Continued					
01389030	Preakness (Singac) Brook near Preakness, NJ	Lat 40°56'55", long 74°13'25", Passaic County, at bridge on Ratzer Road, 1.0 mi north of Preakness, and 2.0 mi upstream from Naachtpunkt Brook.	3.24	1979-83	3-28-83	b3.56	428
01389534	Peckman River at Ozone Avenue at Verona, NJ	Lat 40°50'42", long 74°14'09", Passaic County, at bridge on Ozone Avenue in Verona, 4.0 mi west of Clifton and 1.0 mi southwest of Cedar Grove Reservoir.	4.45	1979-83	4-16-83	b3.81	920
01389765	Molly Ann Brook at North Haledon, NJ	Lat 40°57'11", long 74°11'07", Passaic County, at bridge on Overlook Avenue in North Haledon, 1.5 mi west of Hawthorne and 0.5 mi upstream from Oldham Pond Dam.	3.89	1979-83	3-28-83	7.20	1,650
01389900	Fleischer Brook at Market Street, Elmwood Park, NJ	Lat 40°53'57", long 74°06'54", Bergen County, at culvert on Market Street in Elmwood Park (formerly East Paterson), and 2.0 mi upstream from mouth. Datum of gage is 35.31 ft National Geodetic Vertical Datum of 1929.	1.37	1967-83	8-11-83	3.15	170
*01390450	Saddle River at Upper Saddle River, NJ	Lat 41°03'32", long 74°05'44", Bergen County, at culvert on Lake Street in Upper Saddle River, and 1.3 mi downstream from Pine Brook. Datum of gage is 186.11 ft National Geodetic Vertical Datum of 1929.	10.9	1966-83	5-30-83	b4.53	1,800
01390810	Hohokus Brook at Allendale, NJ	Lat 41°01'37", long 74°08'44", Bergen County, at bridge on Brookside Avenue in Allendale, and 0.2 mi downstream from Valentine Brook. Datum of gage is 277.46 ft National Geodetic Vertical Datum of 1929.	9.11	1969-83	3-28-83	5.57	430
01390900	Ramsey Brook at Allendale, NJ	Lat 41°01'44", long 74°08'07", revised, Bergen County, at bridge on Brookside Avenue in Allendale and 0.6 mi upstream from Hohokus Brook. Datum of gage is 270.79 ft National Geodetic Vertical Datum of 1929.	2.55	1975-83	5-30-83	b2.95	268
01392500	Second River at Belleville, NJ	Lat 40°47'17", long 74°10'19", Essex County, on Mill Street in Branch Brook Park at Belleville, 300 ft downstream from Franklin Avenue, and 1,100 ft downstream from Hendricks Pond dam. Datum of gage is 62.6 ft National Geodetic Vertical Datum of 1929.	11.6	1937-64‡, 1963-83	4-16-83	5.98	2,350

ANNUAL MAXIMUM DISCHARGE AT CREST-STAGE PARTIAL-RECORD STATIONS--Continued

Station No.	Station name	Location	Drainage area (mi²)	Period of record	Annual maximum		
					Date	Gage height (feet)	Discharge (ft³/s)
		Raritan River basin					
01397500	Walnut Brook near Flemington, NJ	Lat 40°30'55", long 74°52'52", Hunterdon County, on right bank 1.2 mi northwest of Flemington, and 2.3 mi upstream from mouth. Datum of gage is 267.33 ft National Geodetic Vertical Datum of 1929.	2.24	1936-61‡, 1965-83	4-16-83	3.27	620
01399830	North Branch Raritan River at North Branch, NJ	Lat 40°36'00", long 74°40'27", Somerset County, on right bank 5 ft upstream from bridge on State Highway 28 in North Branch, 0.1 mi south of River Brook, and 3.6 mi upstream from confluence with South Branch Raritan River. Datum of gage is 56.94 ft National Geodetic Vertical Datum of 1929.	174	1977-81, 1982-83	2-03-82 4-16-83	c13.19 14.44	c8,380 10,400
01400630	Millstone River at Southfield Road near Grovers Mill, NJ	Lat 40°18'12", long 74°34'33", Mercer County, at bridge on Southfield Road, 0.2 mi southeast at Grovers Mill, 3.5 mi southwest of Cranbury, and 3.0 mi upstream of Bear Brook. Datum of gage is 62.63 ft National Geodetic Vertical Datum of 1929.	41.0	1971,1975 1979-83	4-16-83	4.94	500
01400730	Millstone River at Plainsboro, NJ	Lat 40°19'27", long 74°36'51", Mercer County, on left bank 30 ft upstream from railroad bridge on AMTRAK (former Penn Central) mainline, 100 ft downstream from Cranbury Brook, 0.2 mi upstream from Bear Brook, and 0.9 mi southwest of Plainsboro. Datum of gage is 53.41 ft National Geodetic Vertical Datum of 1929.	65.8	1965-75‡, 1976-83	8-11-83	4.57	950
01400775	Bear Brook at Route 535 near Locust Corner, NJ	Lat 40°16'41", long 74°34'39", revised, Mercer County, at bridge on State Route 535, 0.9 mi southwest of Locust Corner, 2.0 mi east of Hightstown, and 4.2 mi above mouth. Datum of gage is 73.75 ft National Geodetic Vertical Datum of 1929.	6.69	1971,1975 1979-83	4-16-83	b5.24	335
01400822	Little Bear Brook at Penns Neck, NJ	Lat 40°19'21", long 74°37'37", Mercer County, at downstream side of bridge on Alexander Road, 0.9 mi southeast of Penns Neck, 2.8 mi southwest of Plainsboro and 1.0 mi above mouth. Datum of gage is 53.96 ft National Geodetic Vertical Datum of 1929.	1.84	1971,1975, 1979-83	8-11-83	12.08	149.0
01400900	Stony Brook at Glenmoore, NJ	Lat 40°21'55", long 74°47'14", Mercer County, at highway bridge on Spur State Route 518, 200 ft east of tracks of CONRAIL, at Glenmoore, and 2.0 mi southwest of Hopewell. Datum of gage is 159.1 ft National Geodetic Vertical Datum of 1929.	17.0	1957-83	4-16-83	b7.75	2,950

ANNUAL MAXIMUM DISCHARGE AT CREST-STAGE PARTIAL-RECORD STATIONS--Continued

					Annual maximum		
Station No.	Station name	Location	Drainage area (mi²)	Period of record	Date	Gage height (feet)	Discharge (ft³/s)
		Raritan River basin--Continued					
*01400930	Baldwin Creek at Pennington, NJ	Lat 40°20'18", long 74°47'50", Mercer County, at bridge on State Route 31, 0.8 mi north of Pennington, and 0.9 mi upstream from Baldwin Lake dam. Datum of gage is 161.69 ft National Geodetic Vertical Datum of 1929.	1.99	1960-83	4-25-83	5.60	410
01400950	Hart Brook near Pennington, NJ	Lat 40°19'17", long 74°45'38", Mercer County, at culvert on Federal City Road, 1.6 mi upstream of mouth, and 1.7 mi southeast of Pennington. Datum of gage after July 1, 1975 is 163.32 ft National Geodetic Vertical Datum of 1929.	0.57	1968-83	4-16-83	3.43	132
01401160	Duck Pond Run near Princeton Junction, NJ	Lat 40°17"47", long 74°38'47", Mercer County, on right bank upstream from bridge on Clarksville Road, 1.5 mi southwest of Princeton Junction, and 4.0 mi south of Princeton. Datum of gage is 72.50 ft National Geodetic Vertical Datum of 1929.	1.35	1980-83	4-16-83	4.42	97
01401200	Duck Pond Run at Clarksville, NJ	Lat 40°18'24", long 74°40'06", Mercer County, at bridge on U.S. Route 1, 0.5 mi upstream from Delaware and Raritan Canal, and 0.9 mi northeast of Clarksville. Datum of gage is 54.14 ft National Geodetic Vertical Datum of 1929.	5.21	1965-83	4-16-83	4.18	202
01401301	Millstone River at Carnegie Lake at Princeton, NJ	Lat 40°22'11", long 74°37'15", Middlesex County, at right end of Carnegie Lake dam, 2.5 mi northeast of Princeton. Datum of gage is 50.00 ft National Geodetic Vertical Datum of 1929.	159	1926-74‡, 1977-83	4-16-83	4.95	6,270
*01401520	Beden Brook near Hopewell, NJ	Lat 40°23'02", long 74°44'28", Mercer County, at bridge on Aunt Molly Road, 0.8 mi upstream from Province Line Road, 1.1 mi southeast of Hopewell, and 2.6 mi southwest of Blawenburg. Datum of gage is 116.43 ft National Geodetic Vertical Datum of 1929.	6.67, revised	1967-83	4-16-83	5.52	960
01401595	Rock Brook near Blawenburg, NJ	Lat 40°25'47", long 74°41'05", Somerset County, at bridge on Burnt Hill Road, 0.7 mi upstream from mouth, 1.0 mi northeast of Blawenburg, and 2.8 mi northwest of Rocky Hill. Datum of gage is 63.45 ft National Geodetic Vertical Datum of 1929.	9.03	1967-83	4-16-83	b5.16	860
01401600	Beden Brook near Rocky Hill, NJ	Lat 40°24'52", long 74°39'02", Somerset County, at bridge on U.S. Route 206, 0.7 mi upstream from Pike Run, 1.2 mi northwest of Rocky Hill, and 4.6 mi north of Princeton. Datum of gage is 38.09 ft National Geodetic Vertical Datum of 1929.	27.6	1967-83	4-16-83	b10.37	3,650

ANNUAL MAXIMUM DISCHARGE AT CREST-STAGE PARTIAL-RECORD STATIONS--Continued

Station No.	Station name	Location	Drainage area (mi²)	Period of record	Annual maximum		
					Date	Gage height (feet)	Discharge (ft³/s)
		Raritan River basin--Continued					
01401870	Six Mile Run near Middlebush, NJ	Lat 40°28'12", long 74°32'42", Somerset County, at bridge on South Middlebush Road, 1.6 mi upstream from mouth, and 2.1 mi south of Middlebush. Datum of gage is 39.91 ft National Geodetic Vertical Datum of 1929.	10.7	1966-83	8-11-83	j4.99	j280
01403395	Blue Brook at Seeleys Pond Dam near Berkeley Heights, NJ	Lat 40°40'02", long 74°24'13", Union County, on wall on right bank, upstream from Seeleys Pond spillway, 300 ft north of Scotch Plains, 1.0 mi west of Mountainside, and 4.5 mi southeast of Berkeley Heights. Datum of gage is 202.05 ft National Geodetic Vertical Datum of 1929.	3.59	1973, 1981-83	d7-28-82 4-10-83	d5.10 4.74	d360 225
		Navesink River basin					
01407290	Big Brook at Marlboro, NJ	Lat 40°19'10", long 74°12'52", Monmouth County, downstream side of bridge on Hillsdale Road, 1.7 mi east of Marlboro, and 3.0 mi northwest of Colts Neck.	6.42	1980-83	4-10-83	b6.64	1,100
		Manasquan River basin					
*01407830	Manasquan River near Georgia, NJ	Lat 40°12'36", long 74°16'41", Monmouth County, at culvert on Jacksons Mill Road near Georgia, and 0.5 mi upstream from Debois Creek. Datum of gage is 70.47 ft National Geodetic Vertical Datum of 1929.	10.6	1969-83	4-10-83	11.54	290
*01408015	Mingamahone Brook at Farmingdale, NJ	Lat 40°11'38", long 74°09'42", Monmouth County, at bridge on Belmar Road in Farmingdale, and 3.0 mi upstream from mouth. Datum of gage is 48.64 ft National Geodetic Vertical Datum of 1929.	6.20, revised	1969-83	4-10-83	5.16	177
*01408030	Manasquan River at Allenwood, NJ	Lat 40°08'35", long 74°07'03", Monmouth County, at bridge on Hospital Road at Allenwood, and 1.5 mi downstream from Mill Run. Datum of gage is 3.56 ft National Geodetic Vertical Datum of 1929.	63.9	1969-83	4-11-83	b8.57	2,000
		Mullica River basin					
**01409000	Cedar Creek at Lanoka Harbor, NJ	Lat 39°52'03", long 74°10'10", Ocean County, at bridge on U.S. Route 9 in Lanoka Harbor, 0.6 mi south of Toms River, and 2.0 mi upstream from mouth. Datum of gage is National Geodetic Vertical Datum of 1929.	53.3, revised	1932-58‡, 1970-71‡, 1979-83	4-24-83	3.11	k

ANNUAL MAXIMUM DISCHARGE AT CREST-STAGE PARTIAL-RECORD STATIONS--Continued

Station No.	Station name	Location	Drainage area (mi²)	Period of record	Annual maximum		
					Date	Gage height (feet)	Discharge (ft³/s)
		Mullica River basin--Continued					
*01409375	Mullica River near Atco, NJ	Lat 39°47'08", long 74°51'38", Burlington County, on left bank of small lake 50 ft downstream from bridge on Jackson-Medford Road, 0.7 mi north of intersection of Route 534 with Jackson-Medford Road, and 1.6 mi east of Atco. Datum of gage is 102.90 ft National Geodetic Vertical Datum of 1929.	3.22	1975-83	4-18-83	b4.50	35.2
*01409403	Wildcat Branch at Chesilhurst, NJ	Lat 39°44'04", long 74°51'33", Camden County, at culvert on Old White Horse Pike, 0.5 mi east of Chesilhurst, and 0.9 mi north of Waterford Works. Datum of gage is 98.98 ft National Geodetic Vertical Datum of 1929.	1.03	1975-83	5-24-83	5.08	11.7
*01409409	Blue Anchor Brook near Blue Anchor, NJ	Lat 39°41'17", long 74°51'00", Camden County, at bridge on Spring Garden Road, 4,000 ft upstream of Route 30 highway bridge, 1.8 mi east of Blue Anchor and 2.2 mi upstream from mouth. Datum of gage is 84.94 ft National Geodetic Vertical Datum of 1929.	3.01	1975-83	4-12-83	4.79	24.5
		Great Egg Harbor River basin					
01410810	Fourmile Branch at New Brooklyn, NJ	Lat 39°41'47", long 74°56'25", Camden County, on left bank 70 ft upstream from bridge on Malaga Road, 0.3 mi northeast of New Brooklyn, 0.3 mi upstream from mouth. Datum of is 101.04 ft National Geodetic Vertical Datum of 1929.	7.74	1972-79‡, 1980-83	6-21-83	4.93	125

*	Also a low-flow partial-record station.
**	Also a tidal crest-stage station.
†	Discharge not determined.
‡	Operated as a continuous-record gaging station.
a	Estimated.
b	Downstream side of bridge.
c	Not previously published.
d	Revised.
e	Backwater from tide.
f	Peak did not reach bottom of gage.
g	Peak discharge for the period was less than the minimum recordable discharge.
h	Peak may have been higher on April 16, 1983. Gage not operating properly.
i	Peak for period June 3, 1983 to Sept. 30, 1983.
j	Peak for period Aug. 2, 1983 to Sept. 30, 1983.
k	Discharge effected by tide.

DISCHARGE MEASUREMENT AT MISCELLANEOUS SITES

Measurements of streamflow at points other than gaging stations are given in the following table. Those that are measurements of base flow are designated by an asterisk (*); measurements of peak flow by a dagger (†).

DISCHARGE MEASUREMENTS MADE AT MISCELLANEOUS SITES DURING WATER YEAR 1983

Stream	Tributary to	Location	Drainage area (mi^2)	Measured previously (water years)	Measurements	
					Date	Discharge (ft^3/s)
		Passaic River basin				
01379100 Dead River	Passaic River	Lat 40°39'15", long 74°34'35", Somerset County, at bridge on Martinsville Road, (NJ Route 525) 0.2 mi upstream from Harrisons Brook, and 0.7 mi south of Liberty Corner.	7.57	1974-75	8-02-83	*.82
01379175 Dead River	Passaic River	Lat 40°39'01", long 74°34'12", Somerset County, at power line crossing, 100 ft below small pond, 200 ft upstream of unnamed tributary on right bank, and 1.0 ft southeast of Liberty Corner.	12	-	8-02-83	*3.0
01379450 Passaic River	Newark Bay	Lat 40°42"49", long 74°24'28", Union County, at bridge on South Street at Oakwood Park, 0.6 mi downstream from Salt Brook, and 2.3 mi southeast of Chatham.	-	-	8-03-83	*28
01379502 Passaic River	Newark Bay	Lat 40°43'44", long 74°22'47, Morris County, at bridge on Watchung Avenue in Chatham, 0.6 mi downstream from railroad bridge, and 2.0 mi northeast of Oakwood Park.	-	-	8-03-83	*30
01379580 Passaic River	Newark Bay	Lat 40°49'39", long 74°20'07", Morris County, at Swinefield Bridge on Eagle Rock Avenue, 1.0 mi southeast of Hanover Neck, 1.7 mi southwest of West Caldwell, and 2.1 mi upstream from mouth of Rockaway River.	128	-	8-04-83	*30
01379735 Rockaway River	Passaic River	Lat 40°54'08", long 74°35'41", Morris County, 100 ft downstream of Stephens Brook, 0.5 mi upstream of Washington Pond, and 1.1 mi southwest of Wharton.	-	-	9-29-83	*9.8
01379760 Green Pond Brook	Rockaway River	Lat 40°57'56", long 74°32'04", Morris County, at bridge on 24th Street in Picatinny Arsenal, 500 ft upstream of Burnt Meadow Brook, and 3.0 mi north of Mount Hope.	-	-	10-05-82	*.90
01379769 Burnt Meadow Brook	Green Road Brook	Lat 40°57'52", long 74°31'57", Morris County, 100 ft upstream from mouth, in Picatinny Arsenal, 1,200 ft downstream of Lake Denmark, and 3.0 mi north of Mount Hope.	-	-	10-05-82	*4.0
01379780 Green Pond Brook	Rockaway River	Lat 40°56'56", long 74°33'28", Morris County, at footbridge below Picatinny Lake in Picatinny Arsenal, and 1.8 mi northwest of Mount Hope.	-	-	10-05-82	*3.8
01379782 Green Pond Brook	Rockaway River	Lat 40°56'23", long 74°33'52", Morris County, at bridge on Farley Avenue in Picatinny Arsenal, 0.8 mi downstream of Picatinny Lake, and 1.4 mi northwest of Mount Hope.	-	-	10-05-82	*5.7
01379784 Bear Swamp Brook	Green Pond Brook	Lat 40°56'45", long 74°34'04", Morris County, at bridge on 6th Street in Picatinny Arsenal, 0.8 mi upstream from mouth and 1.8 mi northwest of Mount Hope.	-	-	10-05-82	*.26

DISCHARGE MEASUREMENTS AT MISCELLANEOUS SITES

DISCHARGE MEASUREMENTS MADE AT MISCELLANEOUS SITES DURING WATER YEAR 1983--Continued

Stream	Tributary to	Location	Drainage area (mi^2)	Measured previously (water years)	Measurements Date	Measurements Discharge (ft^3/s)
		Passaic River basin--Continued				
01379785 Bear Swamp Brook	Green Pond Brook	Lat 40°56'29", long 74°33'18", Morris County, at bridge on 3rd Street in Picatinny Arsenal, 0.5 mi upstream of mouth, and 1.8 mi northwest of Mount Hope.	-	-	10-05-82	*.55
01379786 Bear Swamp Brook	Green Pond Brook	Lat 40°56'19", long 74°33'18", at bridge on 2nd Street in Picatinny Arsenal, 0.3 mi upstream from mouth, and 1.9 mi northwest of Mount Hope.	-	-	10-05-82	*.32
01379787 Bear Swamp Brook	Green Pond Brook	Lat 40°56'11", long 74°34'12", Morris County, at walk bridge on golf course at Picatinny Arsenal, 0.1 mi upstream of mouth, and 1.6 mi of Mount Hope.	-	-	10-05-82	*.41
01379788 Green Pond Brook	Rockaway River	Lat 40°55'58", long 74°34'12", Morris County, just below sewage treatment plant at Picatinny Arsenal, 1.5 mi downstream of Picatinny Lake, and 1.7 mi west of Mount Hope.	-	-	10-05-82	*7.1
01379789 Green Pond Brook	Rockaway River	Lat 40°55'15", long 74°35'04", Morris County, at bridge on former Wharton and Northern Railroad in Picatinny Arsenal, 2.5 mi downstream of Picatinny Lake, and 0.5 mi east of Berkshipe Valley.	-	-	10-05-82	*6.4
01379805 Rockaway River	Passaic River	Lat 40°53'29", long 74°34'10", Morris County, 0.5 mi upstream from Jackson Brook, 0.7 mi downstream from Green Pond Brook, and 2.0 mi east of Roxbury.	-	-	9-29-83	*13
01379808 Rockaway River	Passaic River	Lat 40°53'17", long 74°34'09", Morris County, 0.2 mi upstream from Jackson Brook, 0.7 mi downstream from Green Pond Brook, and 2.1 mi east of Roxbury.	-	-	9-29-83	*12
01381940 Passaic River	Newark Bay	Lat 40°52'56", long 74°20'25", Morris County, at bridge on on Horseneck Road, 1.5 mi north of Pine Brook, and 8.7 mi above Pompton River.	350	1970	8-04-83	*115
0138742503 Ramapo River	Pompton River	Lat 41°06'15", long 74°09'24", Bergen County, upstream of mouth of Mahwah River, 0.5 mi southeast of New York State line, and 0.6 mi upstream of bridge on State Route 17.	93.8	1982	10-13-82	*19
01387483 Mahwah River	Ramapo River	Lat 41°06'19", long 74°08'59", Bergen County, at Conrail railroad bridge in West Mahwah, 2,640 ft upstream of mouth, and 0.1 mi southwest of New York State Line.	-	1982	10-13-82	*2.3
01387485 Masonicus Brook	Mahwah River	Lat 41°04'32", long 74°08'20", Bergen County, at bridge on Franklin Turnpike, 0.6 mi northwest of Camp Hlond Reservoir, and 1.3 mi northeast of Ramsey.	-	1982	10-13-82	*.10

DISCHARGE MEASUREMENTS AT MISCELLANEOUS SITES

DISCHARGE MEASUREMENTS MADE AT MISCELLANEOUS SITES DURING WATER YEAR 1983--Continued

Stream	Tributary to	Location	Drainage area (mi²)	Measured previously (water years)	Measurements	
					Date	Discharge (ft³/s)
		Passaic River basin--Continued				
01387769 Ramapo River	Pompton River	Lat 41°02'57", long 74°14'40", Bergen County, 0.9 mi downstream of Fox Brook, 1.6 mi upstream from Crystal Lake outlet, and 1.8 mi north of Oakland.	-	-	10-12-83	*26
01387770 Ramapo River tributary No. 9	Ramapo River	Lat 41°02'48", long 74°13'27", Bergen County, 0.3 mi above mouth, and 1.4 mi northeast of intersection of State Route 200, and U.S. Route 202 at Oakland.	.07	1964, 1982	10-13-82	*.01
01387800 Ramapo River tributary No. 10	Ramapo River	Lat 41°02'30", long 74°13'38", Bergen County, 0.3 mi above mouth, 1.0 mi northeast of intersection of State Route 200, and U.S. Route 202 at Oakland.	.17	1964, 1982	10-13-82	*0
01387810 Ramapo River tributary No. 11	Ramapo River	Lat 41°02'14", long 74°14'29", Bergen County, near north end of Crystal Lake, 50 ft above mouth, 0.6 mi northwest of intersection of State Route 200, and U.S. Route 202 at Oakland.	.28	1964, 1982	10-13-82	*0
01387811 Ramapo River	Pompton River	Lat 41°02'12", long 74°14'30", Bergen County, at bridge on Lenape Lane, 550 ft northwest of Chrystal Lake, 175 ft downstream from unnamed tributary, and 0.8 mi north of Oakland.	-	1982	10-13-82	*28
01387879 Pond Brook tributary	Pond Brook	Lat 41°01'45", long 74°14'13", Bergen County, at mouth, at downstream right bank of bridge on U.S. Route 202, and 0.2 mi northeast of State Route 208 at Oakland.	.33	1968, 1982	10-13-82	*.13
01387900 Ramapo River tributary No. 4	Ramapo River	Lat 41°01'52", long 74°15'09", Bergen County, at bridge of Skyline Drive, 0.3 mi above mouth, and 0.8 mi west of Oakland.	.34	1963-64, 1982	10-13-82	*0
01387910 Ramapo River	Pompton River	Lat 41°01'19", long 74°15'25", Bergen County, 1.2 mi southwest of Oakland, and 2.2 mi northeast of Pompton Lakes.	144	1963-64,	10-13-82	*26
01388900 Packanack Brook	Pompton River	Lat 40°55'12", long 74°16'04", Passaic County, at bridge on Pompton Turnpike (State Route 23) at Mountain View, and 0.4 mi above mouth.	2.84	1963	8-03-83	*1.2
01389140 Deepavaal Brook	Passiac River	Lat 40°53'14", long 74°16'00", Essex County, at bridge on Little Falls Road, 300 ft northwest of Pier Lane, 400 ft upstream from Passaic River, and 0.8 mi southeast of Two Bridges.	7.57	1970	8-03-83	*2.5
01389400 Passaic River	Newark Bay	Lat 40°52'46", long 74°14'49", Passaic County, at bridge on Pompton Turnpike (Route 23) in Singac, 300 ft upstream from the Erie-Lackawanna railroad bridge, and 1.3 mi northwest of Little Falls.	-	-	8-04-83	*230
01389630 Passaic River	Newark Bay	Lat 40°54'14", long 74°12'03", Passaic County, at bridge on Towowa Road in Towowa, 0.9 mi upstream from Molly Ann Brook, and 2.3 mi northeast of Little Falls.	-	1972	8-03-83	*213

DISCHARGE MEASUREMENTS AT MISCELLANEOUS SITES

DISCHARGE MEASUREMENTS MADE AT MISCELLAOUS SITES DURING WATER YEAR 1983--Continued

Stream	Tributary to	Location	Drainage area (mi^2)	Measured previously (water years)	Measurements	
					Date	Discharge (ft^3/s)
		Passaic River basin--Continued				
01391200 Saddle River	Passaic River	Lat 40°56'30", long 74°05'36" Bergen County, at bridge on Century Road in Fair Lawn, and 0.8 mi downstream of Hohokus Brook.	45.2	-	10-08-82 1-06-83	24 59
		Raritan River basin				
01396535 South Branch Raritan River	Raritan River	Lat 40°38'49", long 74°53'52", Hunterdon County, at bridge on Arch Street in High Bridge, 0.9 mi northeast of Mariannes Corner, and 4.3 mi northeast of Norton.	68.8	-	12-22-82 3-28-83	*75 679
01396588 Spruce Run	South Branch Raritan River	Lat 40°40'41", long 74°55'06", Hunterdon County, at site 800 ft downstream of Rocky Run, 0.3 mi upstream from Van Syckel Road bridge, 1.5 mi northwest of High Bridge, and 1.6 mi southeast of Glen Gardner.	15.5	1979-82	12-22-82	*13
01397380 Bushkill Brook	South Branch Raritan River	Lat 40°31'15", long 74°40'40", Hunterdon County, at bridge on River Road in Rockefellows Mills, 200 ft upstream from mouth, and 1.5 mi west of Three Bridges.	4.31	-	12-21-82	*7.0
01397400 South Branch Raritan River	Raritan River	Lat 40°31'01", long 74°48'10", Hunterdon County, at bridge on Main Street in Three Bridges, 1.4 mi downstream from Bushkill Brook, and 3.0 mi northeast of Flemington.	181	-	12-10-82	89
01398102 South Branch Raritan River	Raritan River	Lat 40°32'48, long 74°41'48", Somerset County, at bridge on South Branch Road in South Branch, and 2.0 mi north of Flagtown.	265	-	12-21-82	*222
01399120 North Branch Raritan River	Raritan River	Lat 40°38'09", long 74°40'56", Somerset County, at bridge on Burnt Mills Road in Burnt Mills, 0.1 mi upstream from Lamington River, and 4.0 mi southwest of Far Hills.	63.8	1964, 1975-78, 1981-82	12-22-82 3-28-83	*42 432
01399780 Lamington River	North Branch Raritan River	Lat 40°38'04", long 74°41'13", Somerset County, at bridge on Walsh Road at Burnt Mills, 0.2 mi upstream from North Branch Raritan River, and 4.4 mi southwest of Far Hills.	100	1964,73, 1975-78, 1981-82	12-22-82 3-28-83	*90 731
01400120 Raritan River	Raritan Bay	Lat 40°33'52", long 74°38'10", Somerset County, at bridge on South Branch-Raritan road in Raritan, and 3.5 mi northeast of South Branch.	474	1975-81	12-21-82	*379
01401440 Millstone River	Raritan River	Lat 40°22'24", long 74°37'15" Middlesex County, at bridge on Lincoln Highway in Kingston, 0.2 mi downstream from the outflow of Carnegie Lake, and 3.0 mi northwest of Plainsboro.	172	-	1-07-83	164
01403200 Middle Brook	Raritan River	Lat 40°33'38", long 74°32'56", Somerset County, at bridge on Lincoln Boulevard (Old State Route 28), at Bound Brook, and 0.5 mi above mouth.	17.2	1955, 1975, 1976, 1982	3-09-83 3-22-83 4-05-83 4-19-83	164 113 *113 136
01405435 Cedar Brook	Manalapan Brook	Lat 40°23'26", long 74°23'31", Middlesex County, 50 ft upstream from mouth at Spotswood, and 4.3 mi south of South River.	3.85	1957-83b, 1983	4-29-83 7-26-83	13 *2.6

DISCHARGE MEASUREMENTS AT MISCELLANEOUS SITES

DISCHARGE MEASUREMENTS MADE AT MISCELLANEOUS SITES DURING WATER YEAR 1983--Continued

Stream	Tributary to	Location	Drainage area (mi^2)	Measured previously (water years)	Measurements	
					Date	Discharge (ft^3/s)
		Navesink River basin				
01407253 Willow Brook	Hop Brook	Lat 40°19'47", long 74°10'6", Monmouth County, at bridge on Willow Brook Road, 1.2 mi southeast of Holmdel, 1.3 mi northeast of Vanderburg, and 1.6 mi northwest of Sugar Loaf Mill.	7.56	1979-82	4-16-83	87
		Mullica River basin				
01409416 Hammonton Creek	Mullica River	Lat 39°38'02", long 74°43'05", Atlantic County, at bridge on Chestnut Road, 0.4 mi south of Wescoatville, and 1.6 mi upstream from Norton Branch.	-	1974, 1978-80	3-28-83	*84

* Base flow.
a Not previously published.
b Operated as continuous gaging station by Duhernal Water Company. Recorder charts on file in U.S. Geological Survey Trenton Office.

The following table contains annual maximum stages for tidal crest-stage stations. The information is obtained from a crest-stage gage or a water-stage recorder located at each site. A crest-stage gage is a device which will register the peak stage occurring between inspections of the gage. All stages are elevations above National Geodetic Vertical Datum of 1929 unless otherwise noted. Only the maximum stage is given. Information on some other high stages may have been obtained but is not published herein. The years given in the period of record represent water years for which the annual maximum has been determined.

ANNUAL MAXIMUM STAGES AT TIDAL CREST-STAGE PARTIAL-RECORD STATIONS

Station No.	Station name	Location	Period of record	Annual maximum Date	Annual maximum Elevation NGVD* (feet)
01406700	Raritan River at Perth Amboy, NJ	Lat 40°30'31", long 74°17'30", Middlesex County, on downstream left bank, 20 ft downstream of Victory Bridge on State Route 35 in Perth Amboy, 0.5 mi downstream from Garden State Parkway bridge, and 1.5 mi upstream from mouth of Raritan River.	1967-70‡, 1980-83	12-20-79 10-25-80 11-15-81 3-18-83	a5.52 a7.04 a5.44 5.79
01407030	Luppatatong Creek at Keyport, NJ	Lat 40°26'08", long 74°12'27", Monmouth County, on left bank upstream side of Front Street bridge in Keyport, 0.1 mi upstream from mouth, and 2.0 mi northwest of Matawan.	1980-83	3-18-83	6.28
01408168	Barnegat Bay at Mantoloking, NJ	Lat 40°02'24", long 74°03'25", Ocean County, at east end of Herbert Street (Mantoloking Road) bridge in Mantoloking, and 2.0 mi south of Bay Head.	1979-83	2-26-83	3.32
01408200	Barnegat Bay at Bay Shore, NJ	Lat 39°56'56", long 74°06'52", Ocean County, at west end of State Route 37 bridge over Barnegat Bay at Bay Shore, 2.2 mi west of Seaside Heights, and 4.5 mi east of Toms River.	1965-83	2-26-83	3.20
01409000	Cedar Creek at Lanoka Harbor, NJ	Lat 39°52'05", long 74°10'06", Ocean County, at bridge on U.S. Route 9 in Lanoka Harbor, 0.6 mi south of Toms River, and 2.0 mi upstream from mouth.	1932-58‡, 1971‡, 1979-83	4-24-83	3.10
01409145	Manahawkin Bay near Manahawkin, NJ	Lat 39°40'13", long 74°12'54", Ocean County, at west end of State Route 72 bridge over Manahawkin Bay, 2.5 mi northwest of Ship Bottom, and 3.1 mi southeast of Manahawkin.	1965-83	2-26-83	3.81
01409285	Little Egg Harbor at Beach Haven, NJ	Lat 39°33'10", long 74°15'07", Ocean County, in Beach Haven at U.S. Coast Guard station, 6.0 mi southeast of Tuckerton and 7.0 mi southeast of Ship Bottom.	1979-83	2-26-83	4.34
01409510	Batsto River at Pleasant Mills, NJ	Lat 39°37'55", long 74°38'40", Ocean County, on right bank, 0.5 mi upstream from mouth, and 1.0 mi southeast of Pleasant Mills.	1958-83‡	3-19-83	4.70
01410100	Mullica River near Port Republic, NJ	Lat 39°33'12", long 74°27'46", Atlantic County, on right bank on bulkhead piling at south end of U.S. Route 9 and Garden State Parkway bridge over Mullica River, 2.8 mi northeast of Port Republic, and 2.8 mi south of New Gretna.	1965-83	2-26-83	4.64

ANNUAL MAXIMUM STAGES AT TIDAL CREST-STAGE PARTIAL-RECORD STATIONS--Continued

Station No.	Station name	Location	Period of record	Annual maximum Date	Annual maximum Elevation NGVD* (feet)
01410500	Absecon Creek at Absecon, NJ	Lat 39°25'45", long 74°31'16", Atlantic County, on right bank 30 ft downstream from Doughty Pond Dam of Atlantic City Water Department, 1 mi west of Absecon, and 3.4 mi upstream from mouth.	1923-29‡, 1933-38‡, 1946-83‡	3-18-83	5.45
01410570	Beach Thorofare at Atlantic City, NJ	Lat 39°21'56", long 74°26'44", Atlantic County, on west abutment south side of Pennsylvania-Reading Seashore Lines railroad swivel bridge in Atlantic City, 0.5 mi northeast of Bader Field airport, and 2.7 mi northeast of Ventnor City.	1978‡, 1979-83	2-26-83	5.13
01411300	Tuckahoe River at Head of River, NJ	Lat 39°18'25", long 74°49'15", Cape May County, on right bank at highway bridge on State Route 49, 0.2 mi upstream from McNeals Branch, 0.4 mi southeast of Head of River, and 3.7 mi west of Tuckahoe.	1979-83‡	4-24-83	4.84
01411318	Crook Horn Creek at Ocean City, NJ	Lat 39°15'09", long 74°37'44", Cape May County, at dock on property of county maintenance yard, 100 ft south of Roosevelt Boulevard, 1.3 mi southeast of Marmora, and 3.3 mi southwest of city hall in Ocean City.	1979-83	2-11-83	4.42
01411320	Great Egg Harbor Bay at Ocean City, NJ	Lat 39°17'03", long 74°34'41", Cape May County, on bulkhead at west end of 7th Street (prior to October 1974, gage was located at Fifth Street), Ocean City, and 2.5 mi southeast of Somers Point.	1965-83	2-11-83	5.82
01411350	Ludlam Thorofare at Sea Isle City, NJ	Lat 39°09'24", long 74°42'00", Cape May County, on bulkhead at west end of 44th Street in Sea Isle City.	1978‡, 1979-83	--	--
01411360	Great Channel at Stone Harbor, NJ	Lat 39°03'26", long 74°45'53", Cape May County, on bulkhead piling at east end of bridge at west end of Borough of Stone Harbor, 3.7 mi southeast of Cape May Court House, and 3.9 mi southwest of Avalon.	1965-83	2-11-83	5.61
01411390	Cape May Harbor at Cape May, NJ	Lat 38°56'54", long 74°53'26", Cape May County, on grounds of U.S. Coast Guard Receiving Center in Cape May, and 0.7 mi southeast of east end of Cape May Canal.	1965-83	2-11-83	5.11

* National Geodetic Vertical Datum of 1929 (NGVD).
† Not determined.
‡ Operated as a continuous record gaging station.
a Revised.

ATLANTIC COUNTY

391821074320701. Local I.D., Longport Obs. NJ-WRD Well Number, 01-0366.

LOCATION.--Lat 39°18'21", long 74°32'08", Hydrologic Unit 02040302, 130 ft southwest of intersection of 14th and Atlantic Avenues, Longport.
Owner: Longport Water Department.

AQUIFER.--Atlantic City 800-foot sand of the Kirkwood Formation of Miocene age.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 6 in, depth 803 ft, screened 753 to 803 ft.

INSTRUMENTATION.--Water-level extremes recorder, May 1977 to current year. Water-level recorder, August 1924 to September 1975.

DATUM.--Land-surface datum is 6.35 ft above National Geodetic Vertical Datum of 1929.
Measuring point: Front edge of cutout in recorder housing, 3.16 ft above land-surface datum.

REMARKS.--Water level affected by tidal fluctuation. Land-surface datum prior to January 1975, 1.35 ft lower. The highest water level measured in this well was 14.00 ft above land-surface datum when drilled in 1895.

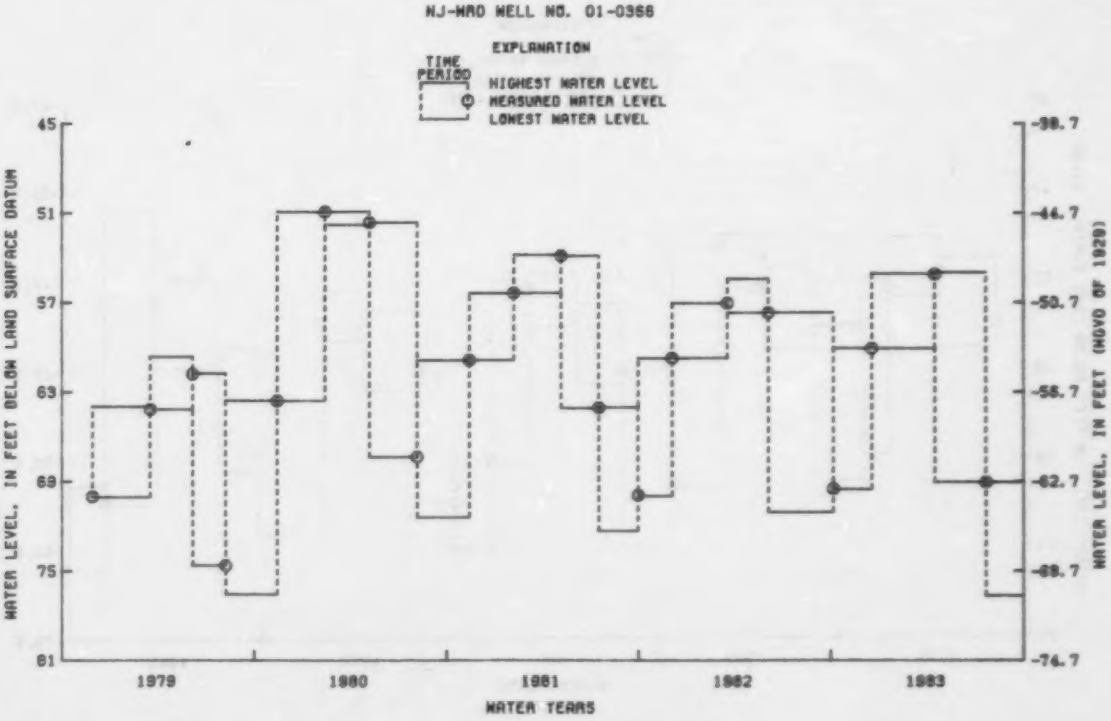
PERIOD OF RECORD.--August 1924 to September 1975, May 1977 to current year. Records for 1977 to 1981 are unpublished and are available in files of New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 19.95 ft below land-surface datum, Jan. 28, 1925; lowest, 106.35 ft below land-surface datum, Aug. 22, 1972.

EXTREMES FOR CURRENT YEAR.--Highest water level, 54.97 ft below land-surface datum, between Apr. 14 and July 20; lowest, 76.64 ft below land-surface datum, between July 20 and Oct. 5, 1983.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

WATER-LEVEL EXTREMES			MEASURED WATER LEVEL	
PERIOD	HIGHEST WATER LEVEL	LOWEST WATER LEVEL	DATE	WATER LEVEL
OCT. 5, 1982 TO DEC. 17, 1982	60.05	69.50	DEC. 17, 1982	60.07
DEC. 17, 1982 TO APR. 14, 1983	55.05	60.07	APR. 14, 1983	55.10
APR. 14, 1983 TO JULY 20, 1983	54.97	69.03	JULY 20, 1983	69.03
JULY 20, 1983 TO OCT. 5, 1983	69.03	76.64	OCT. 5, 1983	71.99



ATLANTIC COUNTY

391827074371001. Local I.D., Jobs Point Obs. NJ-WRD Well Number, 01-0578.

LOCATION.--Lat 39°18'26", long 74°37'09", Hydrologic Unit 02040302, on the west side of the Garden State Parkway at interchange 29, Somers Point.
Owner: U.S. Geological Survey.

AQUIFER.--Atlantic City 800-foot sand of the Kirkwood Formation of Miocene age.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 8 in, depth 680 ft, screened 670 to 680 ft.

INSTRUMENTATION.--Water-level extremes recorder, May 1977 to current year. Water-level recorder, October 1959 to June 1975.

DATUM.--Land-surface datum is 10.00 ft above National Geodetic Vertical Datum of 1929.
Measuring point: Front edge of cutout in recorder housing, 9.62 ft above land-surface datum.

REMARKS.--Water level affected by tidal fluctuation.

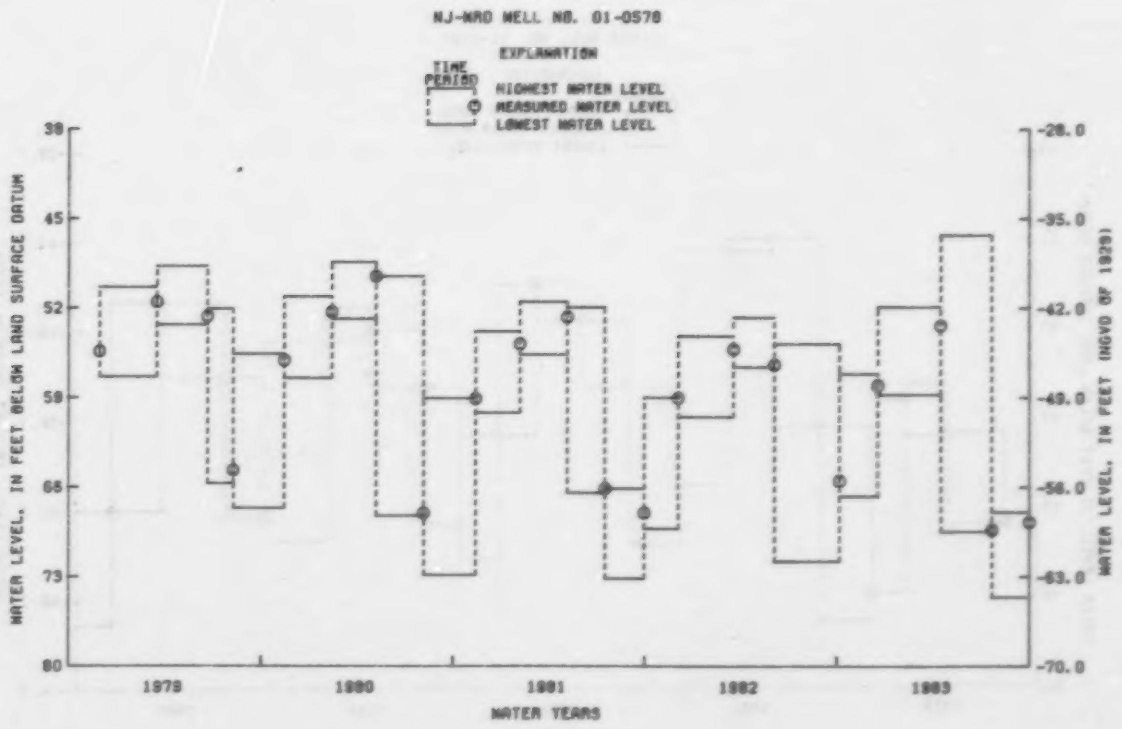
PERIOD OF RECORD.--October 1959 to June 1975, May 1977 to current year. Records for 1975 to 1980 are unpublished and are available in files of New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 29.10 ft below land-surface datum, Apr. 13, 1961; lowest, 74.58 ft below land-surface datum, between July 20 and Sept. 29, 1983.

EXTREMES FOR CURRENT YEAR.--Highest water level, 46.27 ft below land-surface datum, between Apr. 14 and July 20; lowest, 74.58 ft below land-surface datum, between July 20 and Sept. 29.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

WATER-LEVEL EXTREMES			MEASURED WATER LEVEL	
PERIOD	HIGHEST WATER LEVEL	LOWEST WATER LEVEL	DATE	WATER LEVEL
OCT. 5, 1982 TO DEC. 17, 1982	57.12	66.71	DEC. 17, 1982	58.01
DEC. 17, 1982 TO APR. 14, 1983	51.89	58.75	APR. 14, 1983	53.36
APR. 14, 1983 TO JULY 20, 1983	46.27	69.45	JULY 20, 1983	69.32
JULY 20, 1983 TO SEPT. 29, 1983	67.92	74.58	SEPT. 29, 1983	68.71



ATLANTIC COUNTY

392153074250101. Local I.D., Galen Hall Obs. NJ-WRD Well Number, 01-0037.

LOCATION.--Lat 39°21'51", long 74°24'59", Hydrologic Unit 02040302, near the intersection of Pacific and Congress Avenues, Atlantic City.

Owner: Atlantic City Municipal Utilities Authority.

AQUIFER.--Atlantic City 800-foot sand of the Kirkwood Formation of Miocene age.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 6 in, depth 837 ft, screened 782 to 837 ft.

INSTRUMENTATION.--Water-level recorder. May 1977 to July 1980, water-level extremes recorder.

DATUM.--Land-surface datum is 9.54 ft above National Geodetic Vertical Datum of 1929.

Measuring point: Front edge of cutout in recorder housing, 0.90 ft above land-surface datum.

REMARKS.--Water level affected by tidal fluctuation and nearby pumping.

PERIOD OF RECORD.--January 1949 to August 1975, May 1977 to current year. Records for 1949 to 1975 are unpublished and are available in files of New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 52.58 ft below land-surface datum, Mar. 7, 1962; lowest, 96.96 ft below land-surface datum, Sept. 23, 1970.

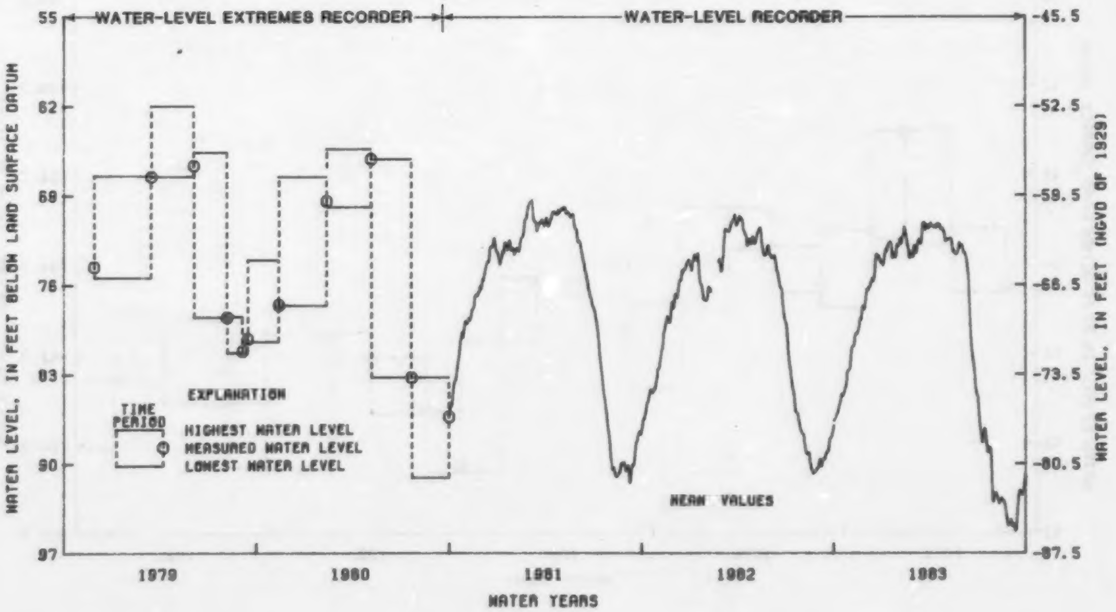
EXTREMES FOR CURRENT YEAR.--Highest water level, 70.98 ft below land-surface datum, Mar. 22; lowest, 95.30 ft below land-surface datum, Sept. 12.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	86.22	80.80	76.45	73.77	72.66	73.17	71.32	72.47	73.47	86.30	92.33	94.87
10	85.56	80.11	75.78	73.31	72.16	72.56	71.45	72.38	73.81	88.05	92.79	94.93
15	84.58	79.74	75.74	72.75	72.06	72.79	71.40	73.06	76.07	87.21	92.75	93.84
20	84.44	78.55	73.73	73.92	73.33	71.13	71.23	73.49	80.58	88.75	92.84	92.06
25	83.55	77.62	73.71	73.70	73.47	71.44	71.53	73.40	82.28	88.71	93.88	92.44
EOM	82.62	77.25	74.23	72.94	73.86	71.59	72.08	73.01	84.43	92.94	94.68	90.73
MEAN	84.70	79.48	75.09	73.37	72.76	72.22	71.45	72.91	77.65	88.08	93.17	93.42

WTR YR 1983 MEAN 79.57 HIGH 71.10 MAR 22 LOW 95.25 SEP 12

NJ-WRD WELL NO. 01-0037

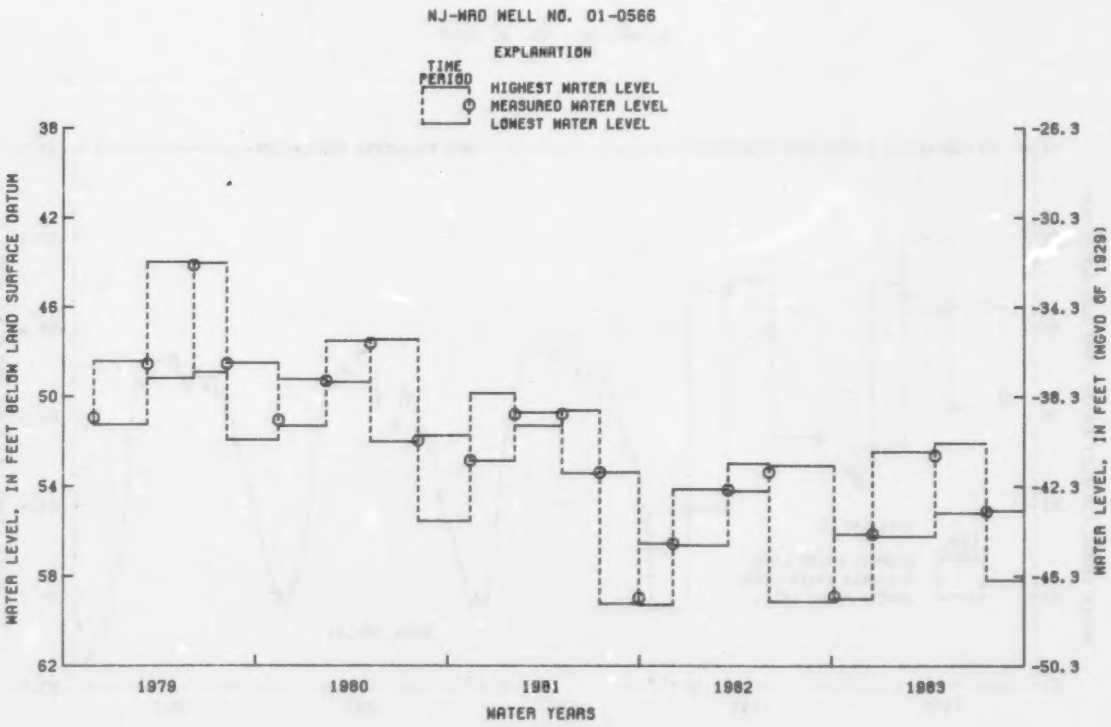


ATLANTIC COUNTY

392436074303501. Local I.D., Atlantic City W.D. 600 Obs. NJ-WRD Well Number, 01-0566.
LOCATION.--Lat 39°24'34", long 74°30'32", Hydrologic Unit 02040302, at the pumping station on Route 585 between Absecon and Pleasantville.
Owner: Atlantic City Municipal Utilities Authority.
AQUIFER.--Atlantic City 800-foot sand of the Kirkwood Formation of Miocene age.
WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 8 in, depth 565 ft, length of screen unknown.
INSTRUMENTATION.--Water-level extremes recorder, May 1977 to current year. Water-level recorder, March 1925 to August 1975.
DATUM.--Land-surface datum is 11.68 ft above National Geodetic Vertical Datum of 1929.
Measuring point: Front edge of cutout in recorder housing, 3.08 ft above land-surface datum.
REMARKS.--Water level affected by nearby pumping.
PERIOD OF RECORD.--March 1925 to August 1975, May 1977 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 14.83 ft below land-surface datum, May 28, 1925; lowest, 61.88 ft below land-surface datum, Oct. 10, 1970.
EXTREMES FOR CURRENT YEAR.--Highest water level, 52.07 ft below land-surface datum, between Apr. 14 and July 20; lowest, 59.01 ft below land-surface datum, between Oct. 5 and Dec. 17.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

WATER-LEVEL EXTREMES			MEASURED WATER LEVEL	
PERIOD	HIGHEST WATER LEVEL	LOWEST WATER LEVEL	DATE	WATER LEVEL
OCT. 5, 1982 TO DEC. 17, 1982	56.12	59.01	DEC. 17, 1982	56.12
DEC. 17, 1982 TO APR. 14, 1983	52.45	56.23	APR. 14, 1983	52.62
APR. 14, 1983 TO JULY 20, 1983	52.07	55.19	JULY 20, 1983	55.12
JULY 20, 1983 TO OCT. 5, 1983	55.08	58.18	OCT. 5, 1983	57.74



ATLANTIC COUNTY

392754074270101. Local I.D., Oceanville 1 Obs. NJ-WRD Well Number, 01-0180.

LOCATION.--Lat 39°27'54", long 74°27'01", Hydrologic Unit 02040302, at Brigantine National Wildlife Refuge, Oceanville.

Owner: U.S. Geological Survey.

AQUIFER.--Atlantic City 800-foot sand of the Kirkwood Formation of Miocene age.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 8 in, depth 570 ft, screened 560 to 570 ft.

INSTRUMENTATION.--Water-level extremes recorder, April 1977 to current year. Water-level recorder, October 1959 to August 1975.

DATUM.--Land-surface datum is 27.17 ft above National Geodetic Vertical Datum of 1929.

Measuring point: Front edge of cutout in recorder housing, 2.50 ft above land-surface datum.

REMARKS.--Water level affected by tidal fluctuation. Land-surface datum prior to January 1975, 0.08 ft higher.

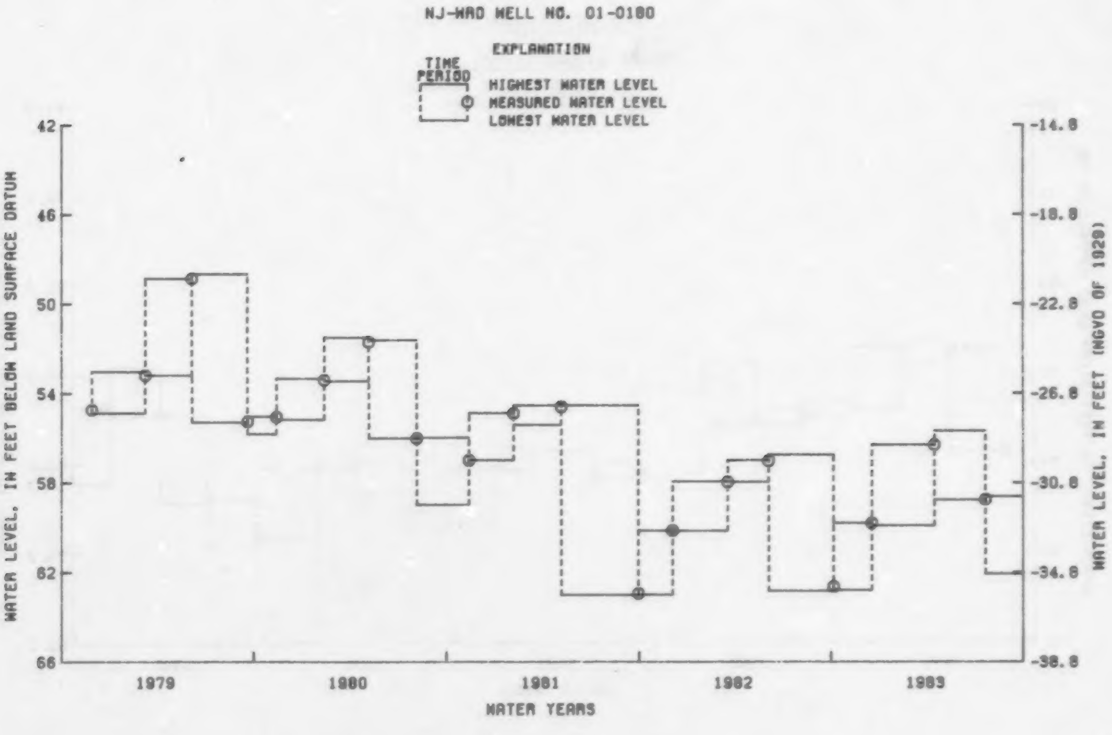
PERIOD OF RECORD.--October 1959 to August 1975, April 1977 to current year. Records for 1975 to 1981 are unpublished and are available in files of New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 33.62 ft below land-surface datum, Apr. 13, 1961; lowest, 63.00 ft below land-surface datum, between May 5 and Sept. 29, 1981.

EXTREMES FOR CURRENT YEAR.--Highest water level, 55.67 ft below land-surface datum, between Apr. 14 and July 20; lowest, 62.79 ft below land-surface datum, between Oct. 5 and Dec. 17.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

WATER-LEVEL EXTREMES			MEASURED WATER LEVEL	
PERIOD	HIGHEST WATER LEVEL	LOWEST WATER LEVEL	DATE	WATER LEVEL
OCT. 5, 1982 TO DEC. 17, 1982	59.79	62.79	DEC. 17, 1982	59.80
DEC. 17, 1982 TO APR. 14, 1983	56.29	59.91	APR. 14, 1983	56.30
APR. 14, 1983 TO JULY 20, 1983	55.67	58.76	JULY 20, 1983	58.75
JULY 20, 1983 TO OCT. 5, 1983	58.60	62.06	OCT. 5, 1983	61.65



ATLANTIC COUNTY

393333074442401. Local I.D., Scholler 1 Obs. NJ-WRD Well Number, 01-0256.

LOCATION.--Lat 39°33'33", long 74°44'26", Hydrologic Unit 02040302, at Scholler Brothers plant, near intersection of Weymouth and Second Roads, Elwood.

Owner: Scholler Brothers Incorporated.

AQUIFER.--Kirkwood-Cohansey aquifer system of Miocene age.

WELL CHARACTERISTICS.--Drilled water-table observation well, diameter 8 in, depth 275 ft, screened 254 to 275 ft.

INSTRUMENTATION.--Water-level extremes recorder, May 1977 to current year. Water-level recorder, April 1962 to August 1975.

DATUM.--Land-surface datum is 93.19 ft above National Geodetic Vertical Datum of 1929.

Measuring point: Front edge of cutout in recorder housing, 2.95 ft above land-surface datum.

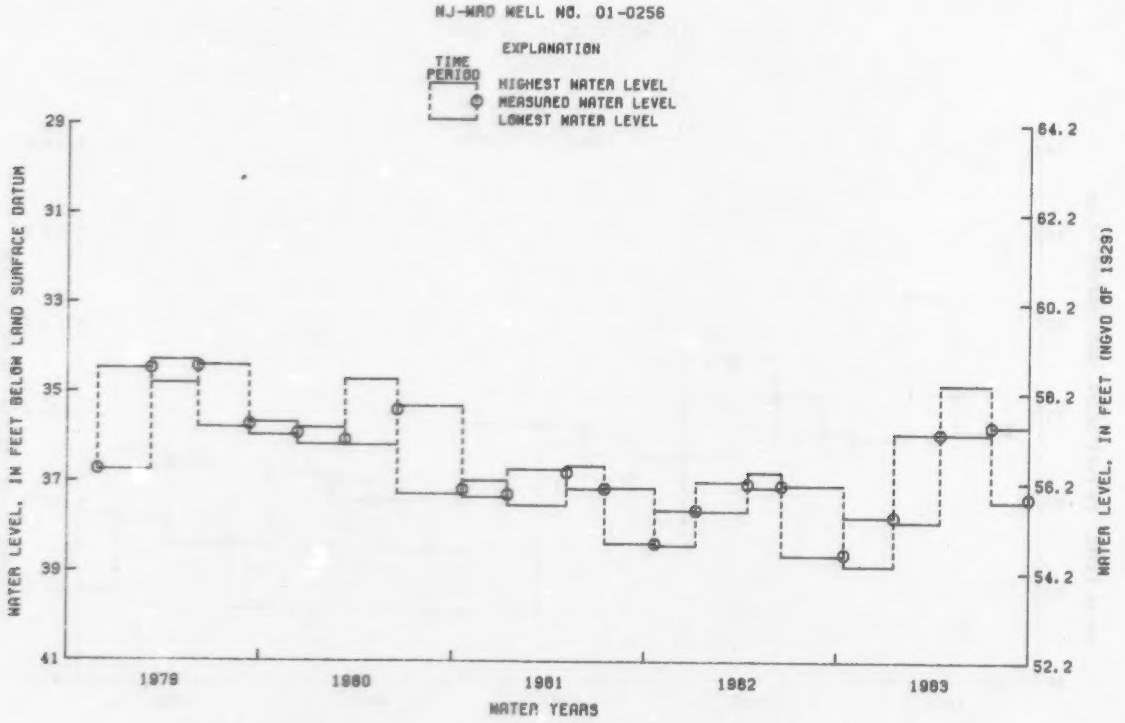
PERIOD OF RECORD.--April 1962 to August 1975, May 1977 to current year. Records for 1962 to 1975 are unpublished and are available in files of New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 27.18 ft below land-surface datum, Mar. 20, 1963; lowest, 39.56 ft below land-surface datum, Sept. 13, 1966.

EXTREMES FOR CURRENT YEAR.--Highest water level, 34.82 ft below land-surface datum, between Apr. 14 and July 20; lowest, 38.86 ft below land-surface datum, between Oct. 14 and Jan. 17.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

WATER-LEVEL EXTREMES			MEASURED WATER LEVEL	
PERIOD	HIGHEST WATER LEVEL	LOWEST WATER LEVEL	DATE	WATER LEVEL
OCT. 14, 1982 TO JAN. 17, 1983	37.77	38.86	JAN. 17, 1983	37.77
JAN. 17, 1983 TO APR. 14, 1983	35.91	37.88	APR. 14, 1983	35.91
APR. 14, 1983 TO JULY 20, 1983	34.82	35.92	JULY 20, 1983	35.75
JULY 20, 1983 TO SEPT. 29, 1983	35.75	37.42	SEPT. 29, 1983	37.34



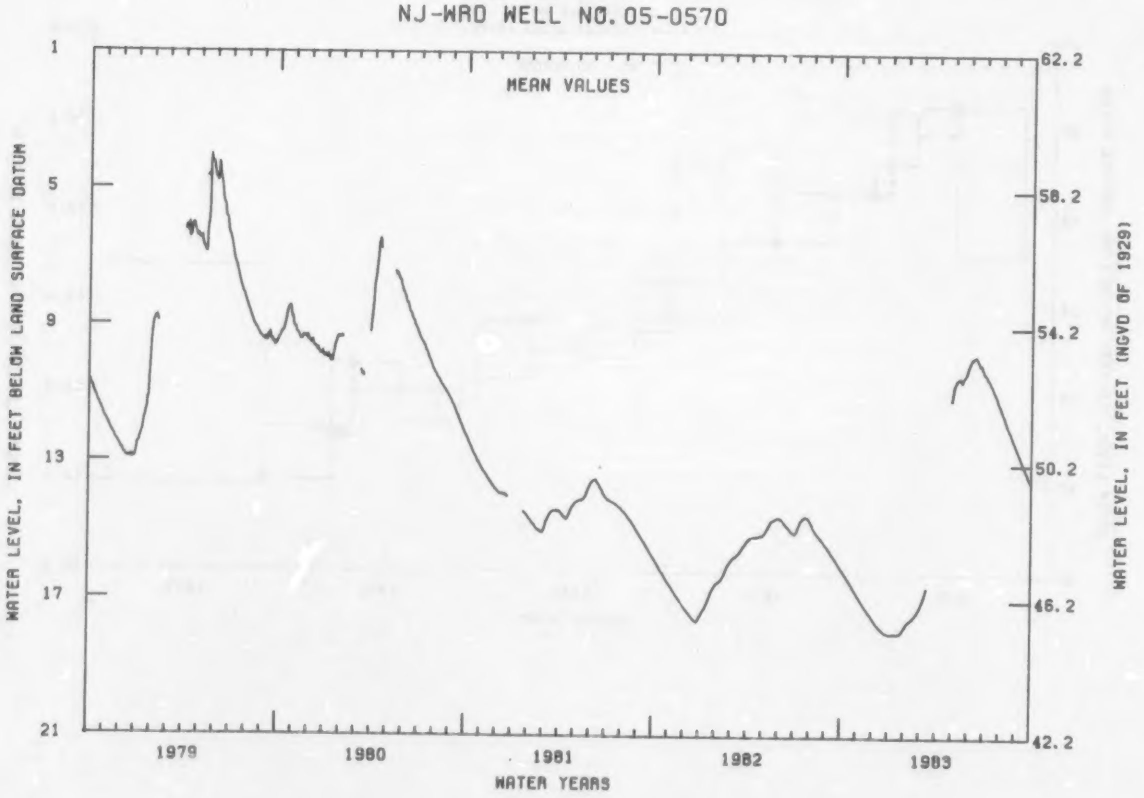
BURLINGTON COUNTY

394106074362501. Local I.D., Mount at Mount Obs. NJ-WRD Well Number, 05-0570.
LOCATION.--Lat 39°41'06", long 74°36'23", Hydrologic Unit 02040301, at Mount in Wharton State Forest.
Owner: U.S. Geological Survey.
AQUIFER.--Kirkwood-Cohansey aquifer system of Miocene age.
WELL CHARACTERISTICS.--Drilled water-table observation well, diameter 8 in, depth 25 ft, open-end cement casing.
INSTRUMENTATION.--Water-level recorder.
DATUM.--Land-surface datum is 63.24 ft above National Geodetic Vertical Datum of 1929.
Measuring point: Top of cement casing, 0.60 ft above land-surface datum.
PERIOD OF RECORD--September 1955 to July 1970, October 1977 to current year. Periodic manual measurements, October 1970 to September 1977. Records for September 1955 to September 1977 are unpublished and are available in files of New Jersey District Office.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 2.92 ft below land-surface datum, Aug. 26, 1958; lowest, 18.51 ft below land-surface datum, Oct. 2, 1966.
EXTREMES FOR CURRENT YEAR.--Highest water level, 9.81 ft below land-surface datum, June 12-14; lowest, 17.95 ft below land-surface datum, Dec. 29-Jan. 8, and Jan. 13-16.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	16.19	16.94	17.62	17.95	17.61	17.01	---	10.62	9.92	10.38	11.49	12.65
10	16.31	17.06	17.71	17.94	17.54	16.78	---	10.49	9.85	10.53	11.69	12.84
15	16.42	17.18	17.79	17.95	17.47	---	---	10.42	9.82	10.67	11.90	13.04
20	16.55	17.29	17.87	17.94	17.39	---	---	10.47	10.00	10.87	12.03	13.19
25	16.67	17.39	17.92	17.87	17.26	---	---	10.37	10.07	11.04	12.27	13.38
EOM	16.82	17.50	17.95	17.72	17.18	---	11.03	10.10	10.31	11.28	12.47	13.52
MEAN	16.45	17.18	17.79	17.91	17.46	---	---	10.47	9.98	10.75	11.91	13.03

WTR YR 1983 MEAN 14.36 HIGH 9.81 JUN 13 LOW 17.95 DEC 30 AND OTHERS



BURLINGTON COUNTY

394208074264502. Local I.D., Oswego Lake 2 Obs. NJ-WRD Well Number, 05-0030.

LOCATION.--Lat 39°42'08", long 74°26'45", Hydrologic Unit 02040301, on the east side of Andrews Road, about 3.0 mi southeast of Oswego Lake, Bass River Township.

Owner: U.S. Geological Survey.

AQUIFER.--Kirkwood-Cohansey aquifer system of Miocene age.

WELL CHARACTERISTICS.--Drilled water-table observation well, diameter 8 in, depth 345 ft, screened 335 to 345 ft.

INSTRUMENTATION.--Water-level extremes recorder, April 1977 to current year. Water-level recorder, February 1962 to July 1970.

DATUM.--Land-surface datum is 92.59 ft above National Geodetic Vertical Datum of 1929.

Measuring point: Front edge of cutout in recorder housing. 2.14 ft above land-surface datum.

PERIOD OF RECORD.--February 1962 to July 1970, April 1977 to current year. Periodic manual measurements, September 1970 to August 1976. Records for 1962 to 1981 are unpublished and are available in files of New Jersey District Office.

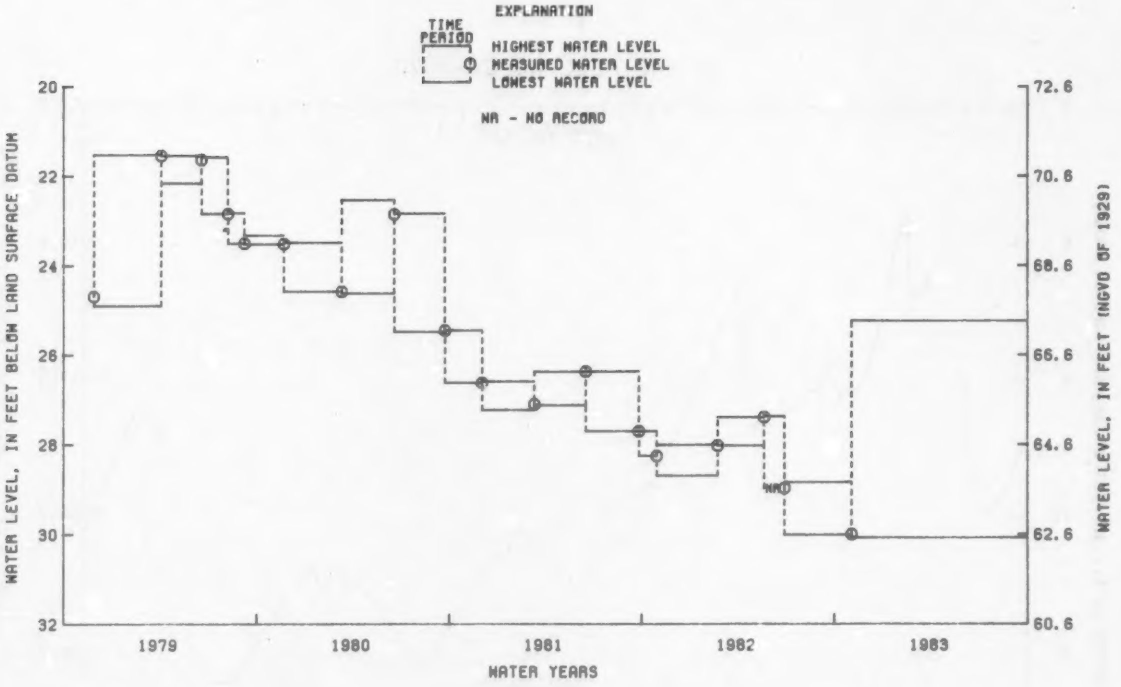
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 21.03 ft below land-surface datum, July 11, 1973; lowest, 30.07 ft below land-surface datum, between Nov. 2, 1982 and Nov. 23, 1983.

EXTREMES FOR CURRENT YEAR.--Highest water level, 25.23 ft below land-surface datum, between Nov. 2, 1982 and Nov. 23 1983; lowest, 30.07 ft below land-surface datum, between Nov. 2, 1982 and Nov. 23, 1983.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

WATER-LEVEL EXTREMES			MEASURED WATER LEVEL	
PERIOD	HIGHEST WATER LEVEL	LOWEST WATER LEVEL	DATE	WATER LEVEL
NOV. 2, 1982 TO NOV. 23, 1983	25.23	30.07	NOV. 23, 1983	27.86

NJ-WRD WELL NO. 05-0030



BURLINGTON COUNTY

394452074281901. Local I.D., Penn State Forest Shallow Obs. NJ-WRD Well Number, 05-0628.

LOCATION.--Lat 39°44'52", long 74°28'19", Hydrologic Unit 02040301, on the west side of Cabin Road, about 500 ft south of intersection with Sooy Road in Penn State Forest, Washington Township.
Owner: U.S. Geological Survey.

AQUIFER.--Kirkwood-Cohansey aquifer system of Miocene age.

WELL CHARACTERISTICS.--Drilled water-table observation well, diameter 6 in, depth 12 ft, open-end steel casing.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Land-surface datum is 78.78 ft above National Geodetic Vertical Datum of 1929.
Measuring point: Top of casing, 2.70 ft above land-surface datum.

REMARKS.--Well deepened from 10 to 12 ft in July 1963. Measuring point prior to July 1963, top of coupling, 0.11 ft above land-surface datum.

PERIOD OF RECORD.--December 1936 to January 1975, October 1977 to current year. Records for 1975 to 1981 are unpublished and are available in files of New Jersey District Office.

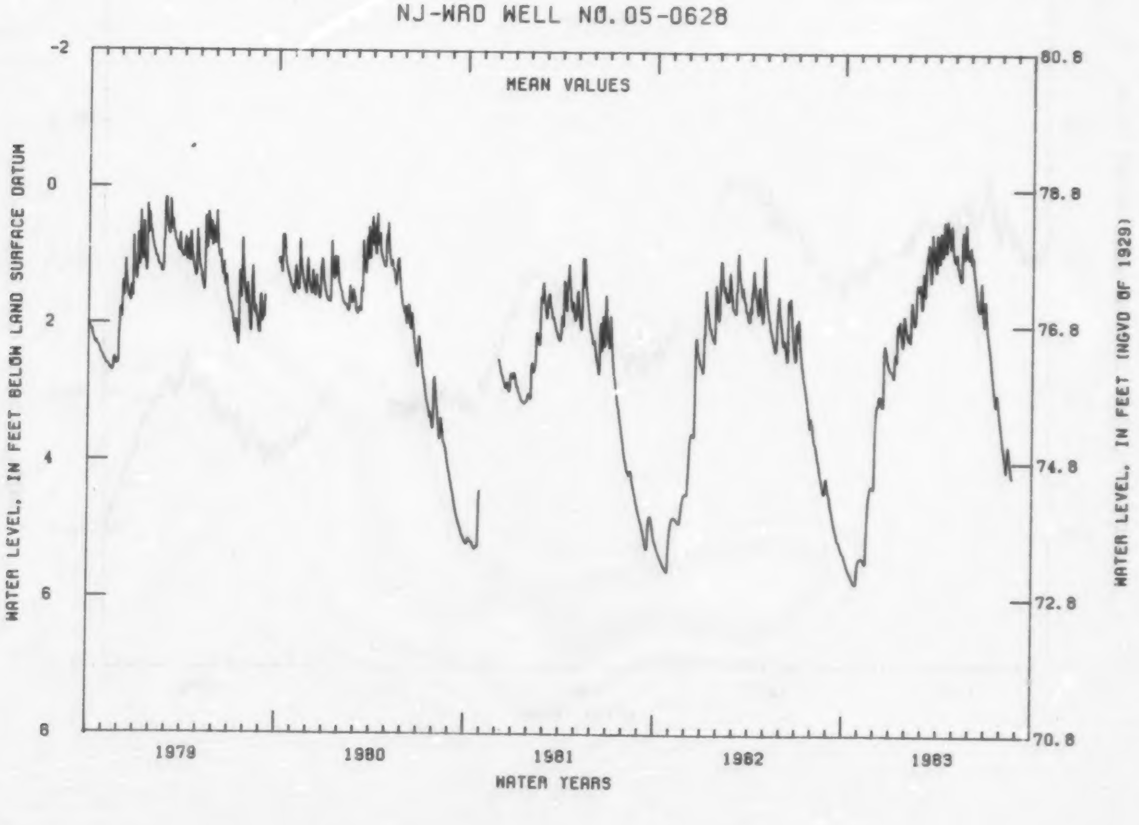
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 0.11 ft above land-surface datum (flowing), several times, 1959-1962; lowest, 5.92 ft below land-surface datum, Dec. 11, 1965.

EXTREMES FOR CURRENT YEAR.--Highest water level, 0.35 ft below land-surface datum, Apr. 16; lowest, 5.79 ft below land-surface datum, Oct. 25.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	5.44	5.39	3.16	2.75	2.18	1.49	.80	.93	.97	2.13	3.79	
10	5.56	5.45	3.05	2.52	1.78	.95	.62	1.22	1.35	2.44	4.09	
15	5.64	4.97	3.18	2.06	1.95	1.19	.91	1.30	1.65	2.79	3.79	
20	5.73	4.42	2.33	2.22	1.41	.84	.56	1.00	1.77	3.12	4.14	
25	5.78	4.37	2.56	1.85	1.48	1.13	.51	.85	1.78	3.11	---	
EOM	5.41	3.65	2.66	2.15	1.74	.97	.99	.93	1.62	3.48	---	
MEAN	5.59	4.87	2.83	2.24	1.78	1.09	.76	.99	1.48	2.74	3.91	

WTR YR 1983 MEAN 2.54 HIGH .44 APR 17 LOW 5.78 OCT 24 AND OTHERS



BURLINGTON COUNTY

395122074301701. Local I.D., Butler Place 1 Obs. NJ-WRD Well Number, 05-0683.

LOCATION.--Lat 39°51'22", long 74°30'17", Hydrologic Unit 02040301, in Lebanon State Forest, Woodland Township. Owner: U.S. Geological Survey.

AQUIFER.--Potomac-Raritan-Magothy aquifer system, undifferentiated, of Cretaceous age.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 8 in, depth 2,117 ft, screened 2,102 to 2,117 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Land-surface datum is 140.66 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of coupling, 2.80 ft above land-surface datum.

PERIOD OF RECORD.--October 1964 to August 1975, March 1977 to current year. Records for 1964 to 1977 are unpublished and are available in files of New Jersey District Office.

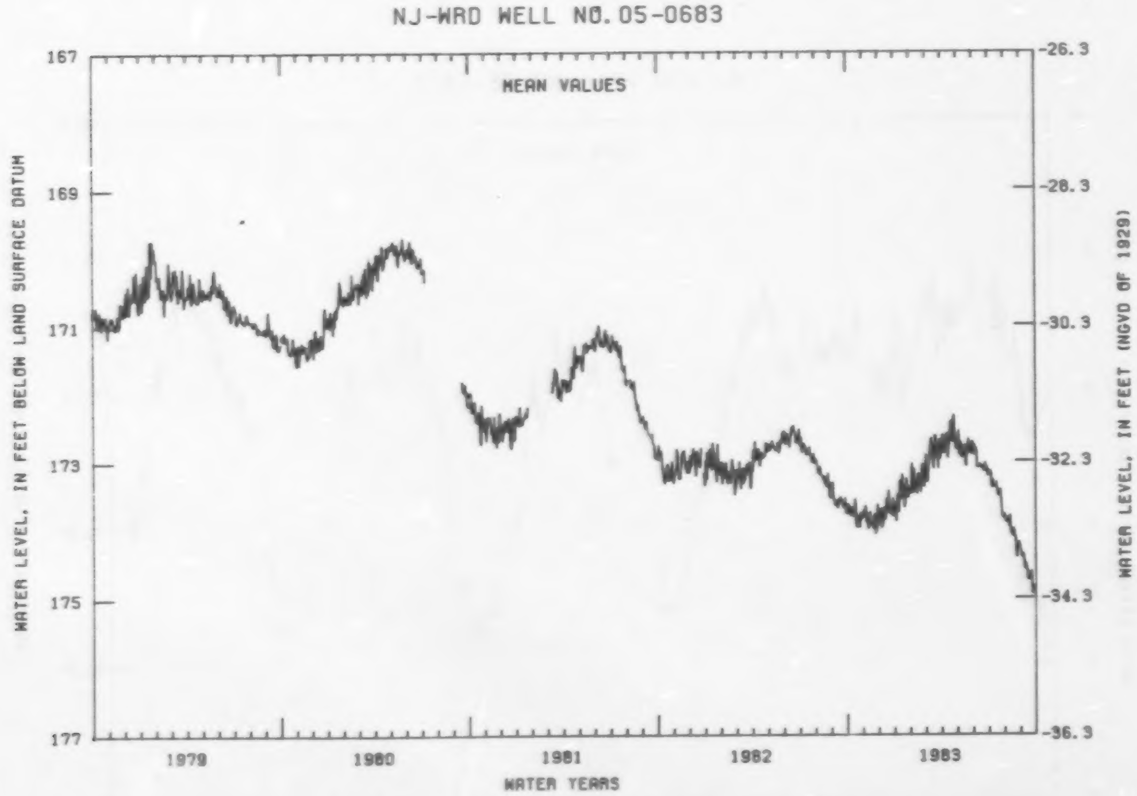
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 143.20 ft below land-surface datum, Feb. 25, 1965; lowest, 174.97 ft below land-surface datum, Sept. 25, 1983.

EXTREMES FOR CURRENT YEAR.--Highest water level, 172.21 ft below land-surface datum, Apr. 25; lowest, 174.97 ft below land-surface datum, Sept. 25.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	173.68	173.66	173.70	173.64	173.47	173.31	172.87	172.70	172.84	173.14	173.90	174.39
10	173.68	173.90	173.80	173.46	173.45	172.87	172.69	172.92	173.10	173.29	173.96	174.52
15	173.68	173.86	173.76	173.20	173.19	172.90	172.83	172.78	173.05	173.35	174.07	174.73
20	173.97	173.99	173.43	173.68	173.46	172.77	172.44	172.94	173.10	173.51	174.03	174.74
25	173.97	174.07	173.70	173.40	173.08	172.92	172.33	172.81	173.03	173.53	174.41	174.95
EOM	173.82	173.86	173.72	173.39	173.31	172.89	172.83	172.72	173.22	173.79	174.24	174.85
MEAN	173.78	173.86	173.74	173.51	173.29	172.93	172.70	172.83	173.03	173.42	174.04	174.64

WTR YR 1983 MEAN 173.48 HIGH 172.33 APR 25 LOW 174.95 SEP 25



BURLINGTON COUNTY

395122074301702. Local I.D., Butler Place 2 Obs. NJ-WRD Well Number, 05-0684.

LOCATION.--Lat 39°51'22", long 74°30'17", Hydrologic Unit 02040301, in Lebanon State Forest, Woodland Township. Owner: U.S. Geological Survey.

AQUIFER.--Kirkwood-Cohansey aquifer system of Miocene age.

WELL CHARACTERISTICS.--Drilled water-table observation well, diameter 4 in, depth 170 ft, screened 160 to 170 ft.

INSTRUMENTATION.--Water-level extremes recorder, March 1977 to current year. Water-level recorder, May 1965 to April 1975.

DATUM.--Land-surface datum is 140.82 ft above National Geodetic Vertical Datum of 1929. Measuring point: Front edge of cutout in recorder housing, 2.67 ft above land-surface datum.

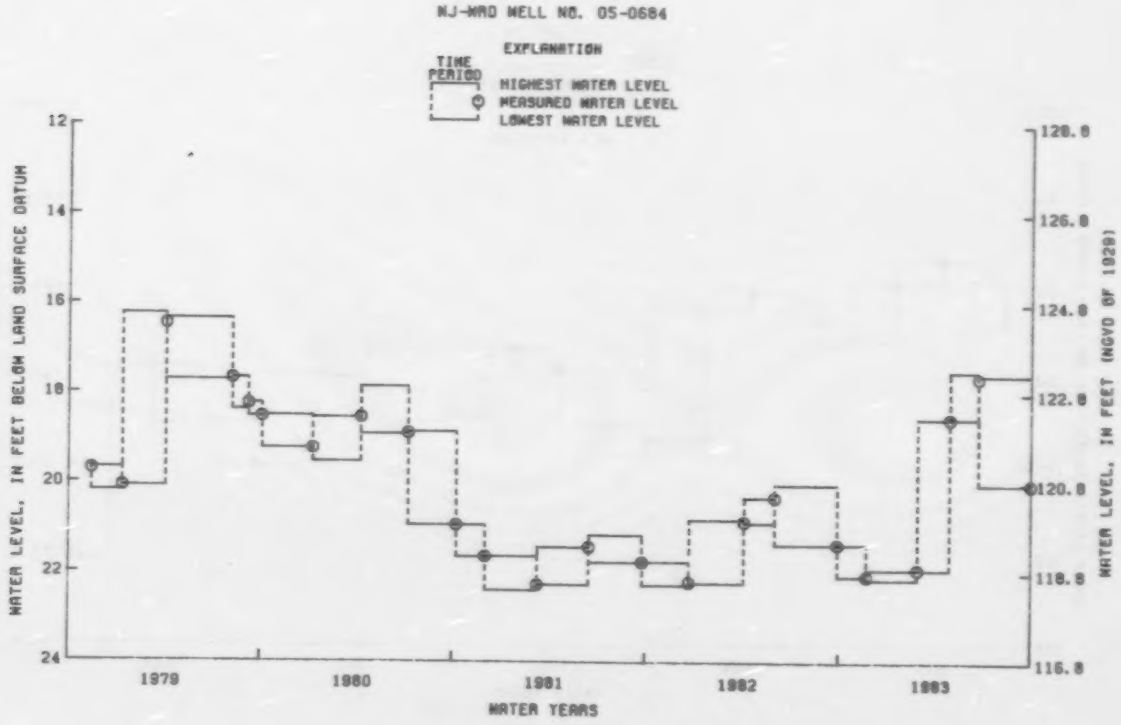
PERIOD OF RECORD.--May 1965 to April 1975, March 1977 to current year. Records for 1965 to 1981 are unpublished and are available in files of New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 15.14 ft below land-surface datum, Feb. 15, 1973; lowest, 23.06 ft below land-surface datum, Feb. 9, 1966.

EXTREMES FOR CURRENT YEAR.--Highest water level, 17.49 ft below land-surface datum, between Apr. 29 and June 22; lowest, 22.13 ft below land-surface datum, between Nov. 23 and Feb. 28.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

WATER-LEVEL EXTREMES			MEASURED WATER LEVEL	
PERIOD	HIGHEST WATER LEVEL	LOWEST WATER LEVEL	DATE	WATER LEVEL
SEPT. 29, 1982 TO NOV. 23, 1982	21.35	22.06	NOV. 23, 1982	22.06
NOV. 23, 1982 TO FEB. 28, 1983	21.90	22.13	FEB. 28, 1983	21.90
FEB. 28, 1983 TO APR. 29, 1983	18.54	21.91	APR. 29, 1983	18.54
APR. 29, 1983 TO JUNE 22, 1983	17.49	18.54	JUNE 22, 1983	17.63
JUNE 22, 1983 TO SEPT. 30, 1983	17.57	20.01	SEPT. 30, 1983	20.01

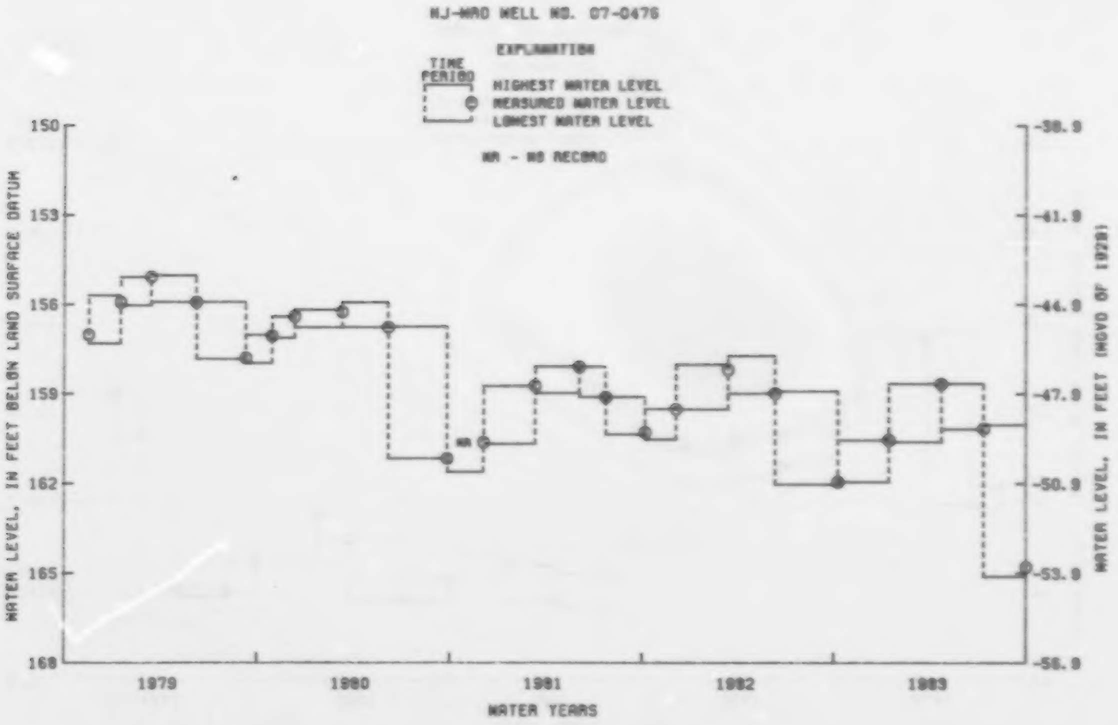


CAMDEN COUNTY

394215074561701. Local I.D., New Brooklyn 1 Obs. NJ-WRD Well Number, 07-0476.
LOCATION.--Lat 39°42'15", long 74°56'17", Hydrologic Unit 02040302, on eastern shore of New Brooklyn Lake about 900 ft upstream of Route 536, Winslow Township.
Owner: U.S. Geological Survey.
AQUIFER.--Potomac-Raritan-Magothy aquifer system, undifferentiated, of Cretaceous age.
WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 4 in, depth 1,505 ft, screened 1,485 to 1,495 ft.
INSTRUMENTATION.--Water-level extremes recorder, February 1977 to current year. Water-level recorder, February 1963 to August 1975.
DATUM.--Land-surface datum is 111.13 ft above National Geodetic Vertical Datum of 1929.
Measuring point: Front edge of cutout in recorder housing, 2.30 ft above land-surface datum.
PERIOD OF RECORD.--February 1963 to August 1975, February 1977 to current year. Records for 1963 to 1981 are unpublished and are available in files of New Jersey District Office.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 120.16 ft below land-surface datum, March 6, 1963; lowest, 165.10 ft below land-surface datum, between July 11 and Sept. 30, 1983.
EXTREMES FOR CURRENT YEAR.--Highest water level, 158.64 ft below land-surface datum, between Apr. 22 and July 11; lowest, 165.10 ft below land-surface datum, between July 11 and Sept. 30.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

WATER-LEVEL EXTREMES			MEASURED WATER LEVEL	
PERIOD	HIGHEST WATER LEVEL	LOWEST WATER LEVEL	DATE	WATER LEVEL
OCT. 8, 1982 TO JAN. 13, 1983	160.54	161.94	JAN. 13, 1983	160.54
JAN. 13, 1983 TO APR. 22, 1983	158.65	160.60	APR. 22, 1983	158.65
APR. 22, 1983 TO JULY 11, 1983	158.64	160.17	JULY 11, 1983	160.15
JULY 11, 1983 TO SEPT. 30, 1983	160.02	165.10	SEPT. 30, 1983	164.78



CAMDEN COUNTY

394215074561702. Local I.D., New Brooklyn Park 2 Obs. NJ-WRD Well Number, 07-0477.

LOCATION.--Lat 39°42'15", long 74°56'17", Hydrologic Unit 02040302, on eastern shore of New Brooklyn Lake about 900 ft upstream of Route 536, Winslow Township.
Owner: U.S. Geological Survey.

AQUIFER.--Upper aquifer, Potomac-Raritan-Magothy aquifer system of Cretaceous age.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 6 in, depth 849 ft, screened 829 to 839 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Land-surface datum is 111.13 ft above National Geodetic Vertical Datum of 1929.
Measuring point: Top edge of recorder shelf, 3.30 ft above land-surface datum.

PERIOD OF RECORD.--January 1963 to August 1975, March 1977 to current year. Records for 1963 to 1975 are unpublished and are available in files of New Jersey District Office.

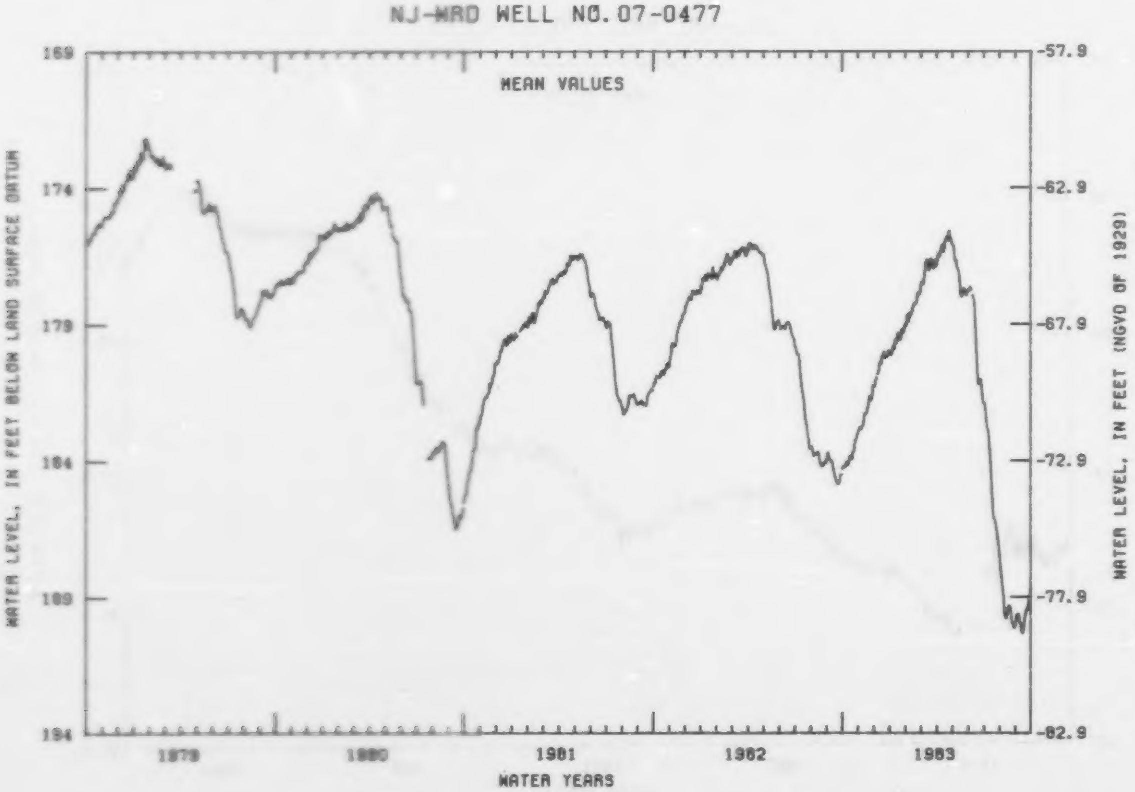
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 131.54 ft below land-surface datum, Mar. 6, 1963; lowest, 190.37 ft below land-surface datum, Sept. 14, 1983.

EXTREMES FOR CURRENT YEAR.--Highest water level, 175.51 ft below land-surface datum, Apr. 24-25; lowest, 190.37 ft below land-surface datum, Sept. 14.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	184.23	182.77	181.02	180.03	178.92	177.57	176.55	176.42	177.69	182.33	188.41	189.61
10	184.15	182.71	180.72	179.80	178.70	176.91	176.16	176.91	178.03	183.03	189.48	189.98
15	183.88	182.25	180.40	179.41	178.27	176.87	176.26	177.28	179.13	184.38	189.62	190.33
20	183.84	182.00	180.00	179.60	178.27	176.70	175.80	177.95	181.13	186.12	189.32	189.61
25	183.32	181.81	180.17	179.25	177.81	176.88	175.57	177.80	181.00	186.48	189.97	189.37
EOM	183.00	181.32	180.12	179.00	177.84	176.83	176.03	177.73	181.91	187.36	190.03	188.65
MEAN	183.82	182.22	180.46	179.56	178.39	176.99	176.14	177.27	179.59	184.63	189.33	189.67

WTR YR 1983 MEAN 181.53 HIGH 175.57 APR 25 LOW 190.36 SEP 14



CAMDEN COUNTY

394215074561703. Local I.D., New Brooklyn Park 3 Obs. NJ-WRD Well Number, 07-0478.

LOCATION.--Lat 39°42'15", long 74°56'17", Hydrologic Unit 02040302, on eastern shore of New Brooklyn Lake about 900 ft upstream of Route 536, Winslow Township.

Owner: U.S. Geological Survey.

AQUIFER.--Wenonah-Mount Laurel aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 6 in, depth 540 ft, screened 520 to 530 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Land-surface datum is 111.45 ft above National Geodetic Vertical Datum of 1929.

Measuring point: Top of 6 inch coupling, 2.10 ft above land-surface datum.

REMARKS.--Water-quality records for 1983 are published elsewhere in this report.

PERIOD OF RECORD.--December 1962 to August 1975, March 1977 to current year. Records for 1962 to 1975 are unpublished and are available in files of New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 58.53 ft below land-surface datum, Dec. 18, 1962; lowest, 76.49 ft below land-surface datum, May 17-18, 1979.

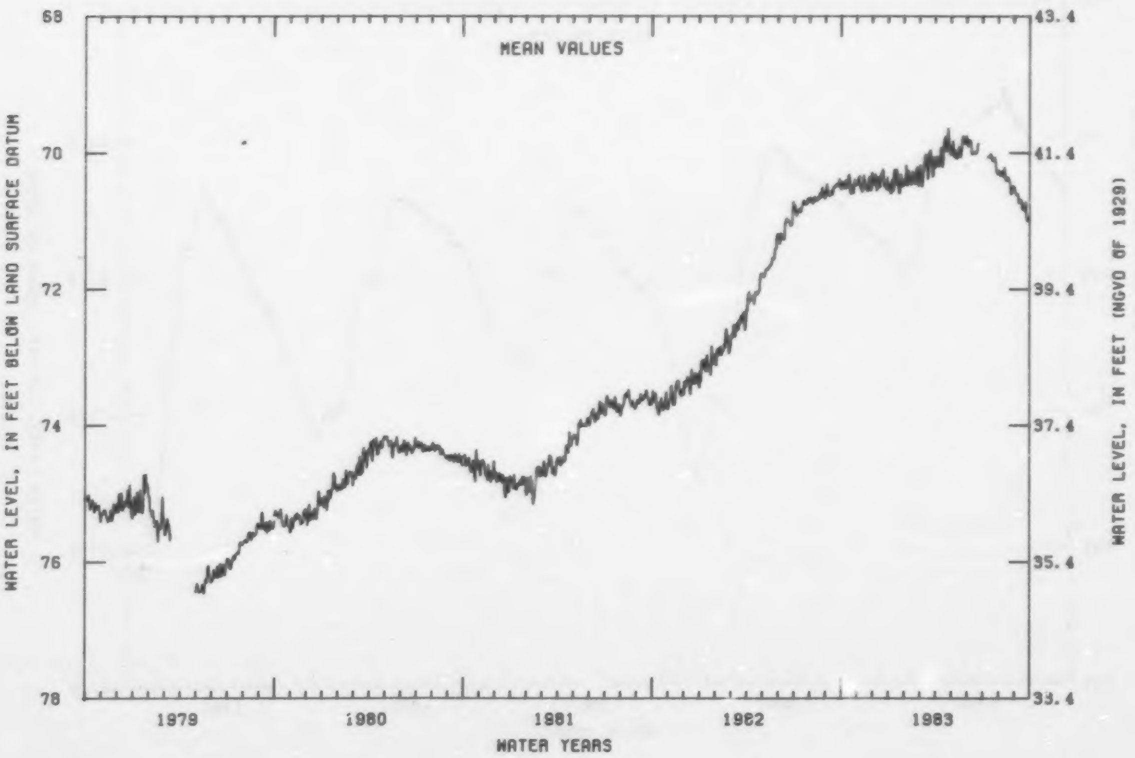
EXTREMES FOR CURRENT YEAR.--Highest water level, 69.61 ft below land-surface datum, Apr. 25; lowest, 71.03 ft below land-surface datum, Sept. 29.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	70.49	70.34	70.35	70.60	70.43	70.45	70.16	69.89	69.81	---	70.33	70.61
10	70.48	70.58	70.53	70.52	70.44	70.15	70.06	70.06	70.02	---	70.35	70.71
15	70.32	70.40	70.49	70.32	70.27	70.20	70.15	69.96	69.98	70.04	70.40	70.79
20	70.57	70.57	70.24	70.58	70.46	70.02	69.76	70.00	69.98	70.12	70.37	70.85
25	70.50	70.55	70.51	70.38	70.24	70.20	69.64	69.81	---	70.11	70.61	71.00
EOM	70.47	70.31	70.55	70.41	70.47	70.20	70.02	69.75	---	70.27	70.51	70.98
MEAN	70.48	70.46	70.43	70.44	70.36	70.21	69.99	69.93	69.93	70.12	70.39	70.77

WTR YR 1983 MEAN 70.31 HIGH 69.64 APR 25 LOW 71.01 SEP 29

NJ-WRD WELL NO. 07-0478



CAMDEN COUNTY

394440074593101. Local I.D., Winslow WC 5 Obs. NJ-WRD Well Number, 07-0503.

LOCATION.--Lat 39°44'40", long 74°59'31", Hydrologic Unit 02040302, about 1,000 ft east of intersection of Cross Keys-Berlin and Erial-Williamstown Roads, Winslow Township.
Owner: Winslow Water Company.

AQUIFER.--Kirkwood-Cohansey aquifer system of Miocene age.

WELL CHARACTERISTICS.--Drilled water-table observation well, diameter 6 in, depth 76 ft, screened 71 to 76 ft.

INSTRUMENTATION.--Water-level extremes recorder, November 1977 to current year. Water-level recorder, December 1972 to September 1977.

DATUM.--Land-surface datum is 173.26 ft above National Geodetic Vertical Datum of 1929.
Measuring point: Front edge of cutout in recorder housing, 1.16 ft above land-surface datum.

PERIOD OF RECORD.--December 1972 to current year. Records for 1972 to 1980 are unpublished and are available in files of New Jersey District Office.

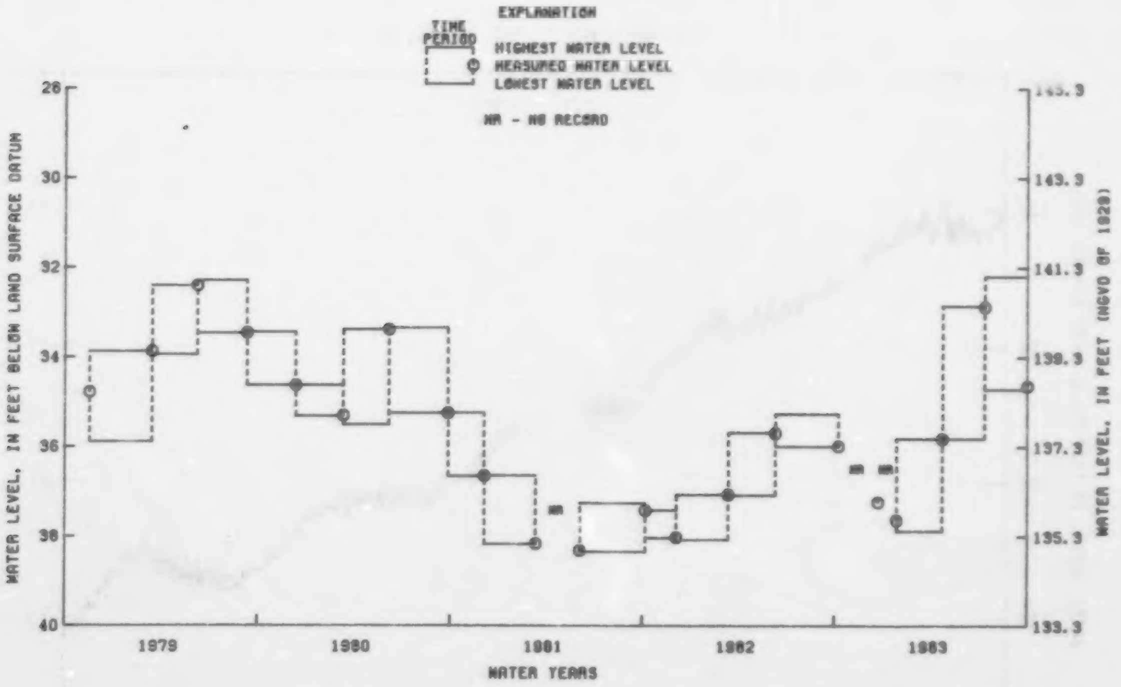
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 26.78 ft below land-surface datum, May 20-21, 1973; lowest, 38.35 ft below land-surface datum, between June 3 and Oct. 6, 1981.

EXTREMES FOR CURRENT YEAR.--Highest water level, 32.20 ft below land-surface datum, between July 11 and Sept. 30; lowest, 37.89 ft below land-surface datum, between Jan. 26 and Apr. 22.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

WATER-LEVEL EXTREMES			MEASURED WATER LEVEL	
PERIOD	HIGHEST WATER LEVEL	LOWEST WATER LEVEL	DATE	WATER LEVEL
OCT. 8, 1982 TO DEC. 22, 1982	---	---	DEC. 22, 1982	37.24
DEC. 22, 1982 TO JAN. 26, 1983	---	---	JAN. 26, 1983	37.64
JAN. 26, 1983 TO APR. 22, 1983	35.82	37.89	APR. 22, 1983	35.82
APR. 22, 1983 TO JULY 11, 1983	32.86	35.82	JULY 11, 1983	32.88
JULY 11, 1983 TO SEPT. 30, 1983	32.20	34.72	SEPT. 30, 1983	34.64

NJ-WRD WELL NO. 07-0503



CUMBERLAND COUNTY

392512074521206. Local I.D., Ragovin 2100 Obs. NJ-WRD Well Number 11-0137.

LOCATION.--Lat 39°25'12", long 74°52'12", Hydrologic Unit 02040302, in wooded area off Harriet Avenue, 1.5 mi southeast of Milmay.

Owner: Sam DeRosa.

AQUIFER.--Potomac-Raritan-Magothy aquifer system, undifferentiated, of Cretaceous age.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 5 in, depth 2,093 ft, screened 2,083 to 2,093 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Altitude of land-surface datum is 85 ft, by altimeter.

Measuring point: Top edge of recorder shelf, 2.40 ft above land-surface datum.

REMARKS.--Land-surface datum prior to October 1979, 6.0 ft higher. This well is screened in a saline zone of the aquifer system (Luzier, 1980, p. 8-12). An equivalent freshwater head is obtained by multiplying the column of water in the well by the ratio of density of water in the well to the density of freshwater. In 1974, the density of water was 1.011 grams per milliliter at 20°C and a plus 17 foot correction was needed to obtain the equivalent freshwater head.

PERIOD OF RECORD.--October 1974 to April 1975, February 1977 to current year. Records for 1974 to 1977 are unpublished and are available in files of New Jersey District Office.

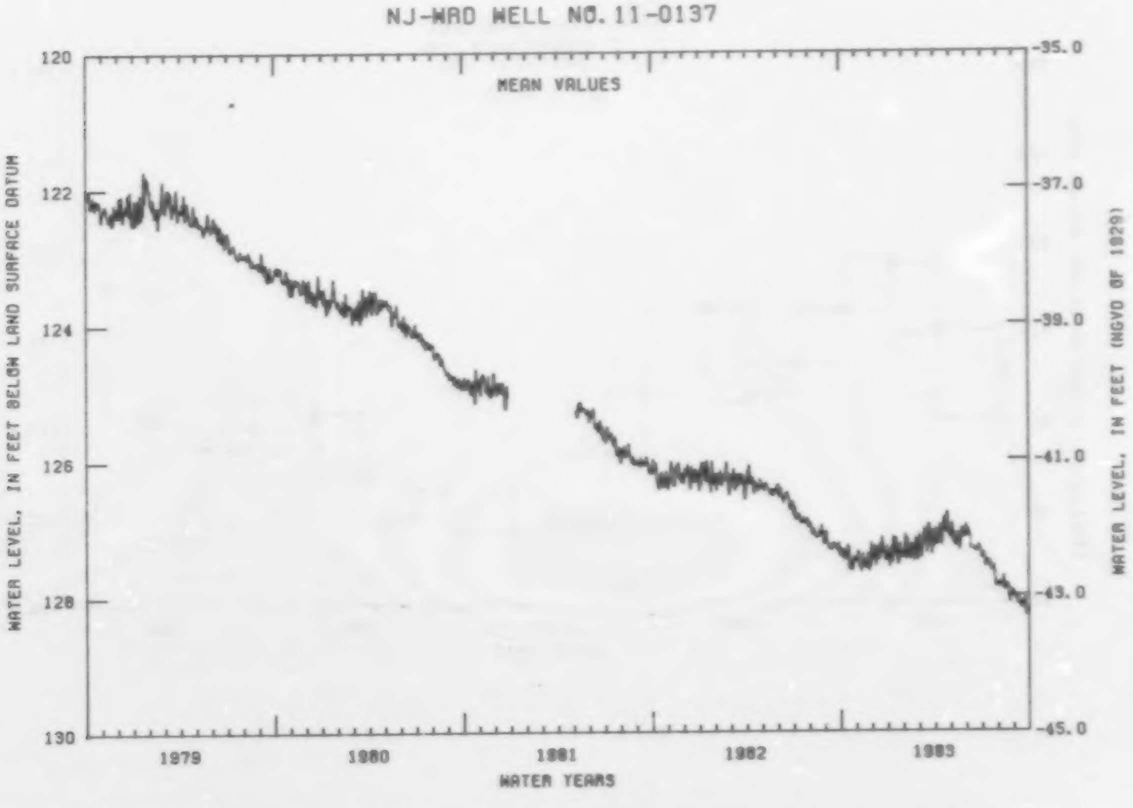
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 115.82 ft below land-surface datum, Apr. 3, 1975; lowest, 128.31 ft below land-surface datum, Sept. 24-25, 1983.

EXTREMES FOR CURRENT YEAR.--Highest water level, 126.67 ft below land-surface datum, Apr. 24; lowest, 128.31 ft below land-surface datum, Sept. 24-25.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	127.41	127.40	127.32	127.49	127.47	127.43	127.25	127.05	127.10	127.38	127.88	128.02
10	127.45	127.65	127.47	127.38	127.44	127.14	127.03	127.25	127.31	127.49	127.88	128.09
15	127.26	127.47	127.44	127.17	127.24	127.20	127.15	127.10	127.29	127.52	127.91	128.18
20	127.55	127.60	127.14	127.55	127.49	127.09	126.87	127.22	127.34	127.64	127.85	128.18
25	127.44	127.64	127.43	127.33	127.20	127.23	126.78	127.10	127.26	127.65	128.10	128.30
EOM	127.50	127.38	127.46	127.37	127.42	127.21	127.14	126.96	127.45	127.82	127.95	128.18
MEAN	127.45	127.50	127.38	127.37	127.33	127.20	127.07	127.13	127.26	127.58	127.90	128.12

WTR YR 1983 MEAN 127.44 HIGH 126.78 APR 24 AND OTHERS LOW 128.30 SEP 25



ESSEX COUNTY

404452074211601. Local I.D., Canoe Brook 30 Obs. NJ-WRD Well Number, 13-0013.

LOCATION.--Lat 40°44'52", long 74°21'16", Hydrologic Unit 02030103, about 0.3 mi north of Canoe Brook pumping station, near Chatham.

Owner: Commonwealth Water Company.

AQUIFER.--Stratified drift of Pleistocene age.

WELL CHARACTERISTICS.--Drilled semi-artesian observation well, diameter 10 in, depth about 130 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Land-surface datum is 170.00 ft above National Geodetic Vertical Datum of 1929.

Measuring point: Top edge of recorder shelf, 6.60 ft above land-surface datum.

REMARKS.--Water level affected by nearby pumping.

PERIOD OF RECORD.--September 1925 to May 1975, April 1977 to current year.

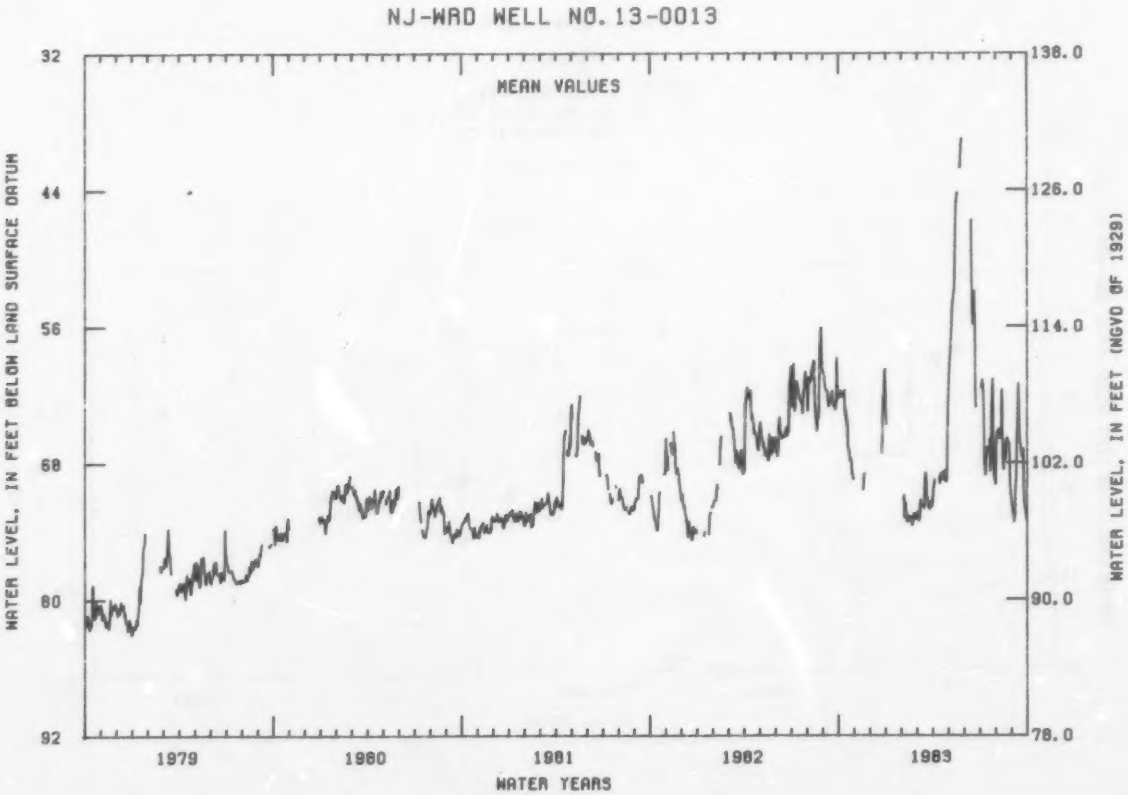
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 7.25 ft below land-surface datum, Aug. 25, 1931; lowest, 86.70 ft below land-surface datum, Oct. 23, 1977.

EXTREMES FOR CURRENT YEAR.--Highest water level, 39.21 ft below land-surface datum, May 26; lowest, 73.59 ft below land-surface datum, Feb. 20.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	61.89	---	---	68.03	72.82	73.16	---	57.59	---	60.68	65.19	73.24
10	62.04	---	---	---	73.09	71.85	---	53.44	---	68.07	65.69	65.44
15	63.39	---	---	---	72.70	71.68	68.92	45.77	51.38	66.65	68.19	65.54
20	66.74	69.06	---	---	73.54	71.01	68.81	---	52.86	65.86	65.87	67.46
25	67.64	---	63.93	---	72.65	71.94	68.68	40.17	---	60.61	66.20	71.79
EOM	---	---	64.23	---	72.89	71.41	63.18	---	---	69.92	71.34	73.13
MEAN	64.64	---	---	---	72.69	71.58	68.89	50.76	---	65.78	66.55	69.02

WTR YR 1983 MEAN 66.05 HIGH 39.50 MAY 26 LOW 73.54 FEB 20



ESSEX COUNTY

404401074083401. Local I.D., Ballantine 8 Obs. NJ-WRD Well Number, 13-0017.

LOCATION.--Lat 40°44'01", long 74°08'34", Hydrologic Unit 02030103, near intersection of Raymond Boulevard and Richard Street, Newark.

Owner: Balco Company.

AQUIFER.--Brunswick Formation of Triassic age.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 16 in, cased to 95 ft, depth 875 ft, open hole.

INSTRUMENTATION.--Water-level extremes recorder, April 1977 to current year. Water-level recorder, January 1949 to July 1975.

DATUM.--Land-surface datum is 12.79 ft above National Geodetic Vertical Datum of 1929.

Measuring point: Front edge of cutout in recorder housing, 1.77 ft above land-surface datum.

REMARKS.--Water level affected by nearby pumping prior to the early 1970's.

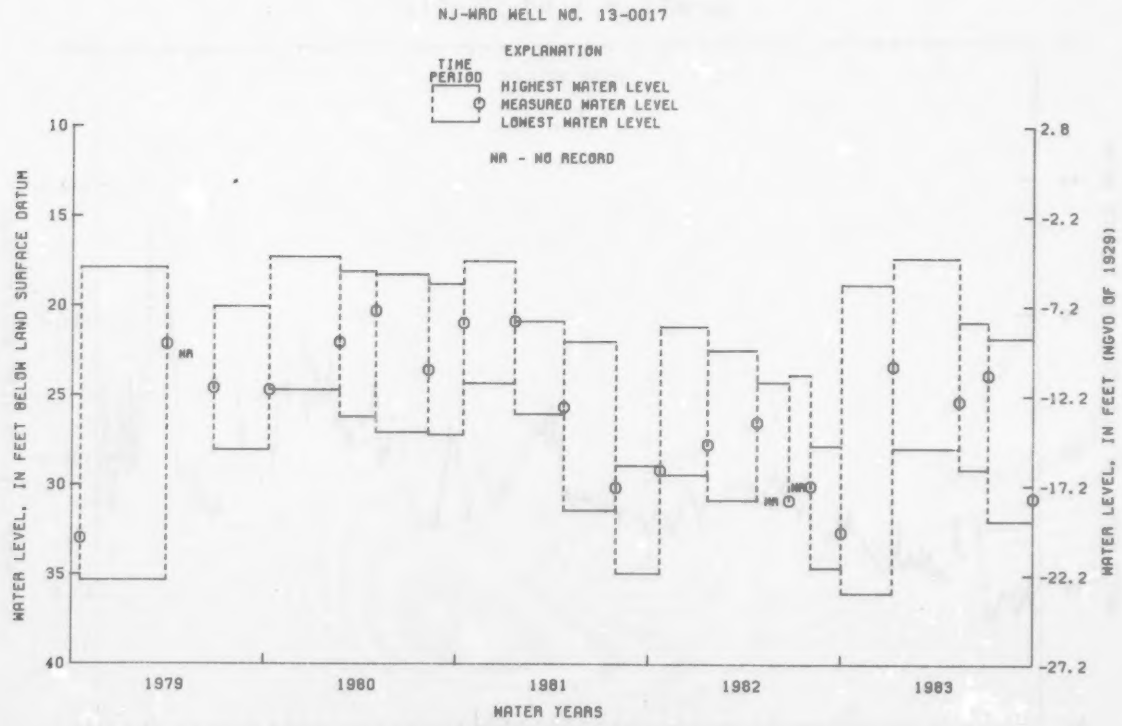
PERIOD OF RECORD.--January 1949 to July 1975, April 1977 to current year. Records for 1949 to 1980 are unpublished and are available in files of New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 17.30 ft below land-surface datum, between Oct. 10, 1979 and Feb. 21, 1980; lowest, 216.59 ft below land-surface datum, Sept. 20, 1957.

EXTREMES FOR CURRENT YEAR.--Highest water level, 17.34 ft below land-surface datum, between Jan. 6 and May 12; lowest, 36.00 ft below land-surface datum, between Sept. 30, 1982 and Jan. 6, 1983.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

WATER-LEVEL EXTREMES			MEASURED WATER LEVEL	
PERIOD	HIGHEST WATER LEVEL	LOWEST WATER LEVEL	DATE	WATER LEVEL
SEPT. 30, 1982 TO JAN. 6, 1983	18.81	36.00	JAN. 6, 1983	23.37
JAN. 6, 1983 TO MAY 12, 1983	17.34	27.94	MAY 12, 1983	25.33
MAY 12, 1983 TO JULY 6, 1983	20.89	29.11	JULY 6, 1983	23.85
JULY 6, 1983 TO SEPT. 30, 1983	21.78	31.99	SEPT. 30, 1983	30.71



MERCER COUNTY

402131074461201. Local I.D., Honey Branch 10 Obs. NJ-WRD Well Number, 21-0088.

LOCATION.--Lat 40°21'28", long 74°46'13", Hydrologic Unit 02030105, at Stony Brook-Millstone Watershed Association, near Pennington.
Owner: Stony Brook-Millstone Watershed Association.

AQUIFER.--Brunswick Formation of Triassic age.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 6 in, cased to about 20 ft, depth 150 ft, open hole.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Land-surface datum is 179.50 ft above National Geodetic Vertical Datum of 1929.
Measuring point: Top edge of recorder shelf, 4.00 ft above land-surface datum.

PERIOD OF RECORD.--June 1967 to August 1975, April 1977 to current year. Records for 1967 to 1975 are unpublished and are available in files of New Jersey District Office.

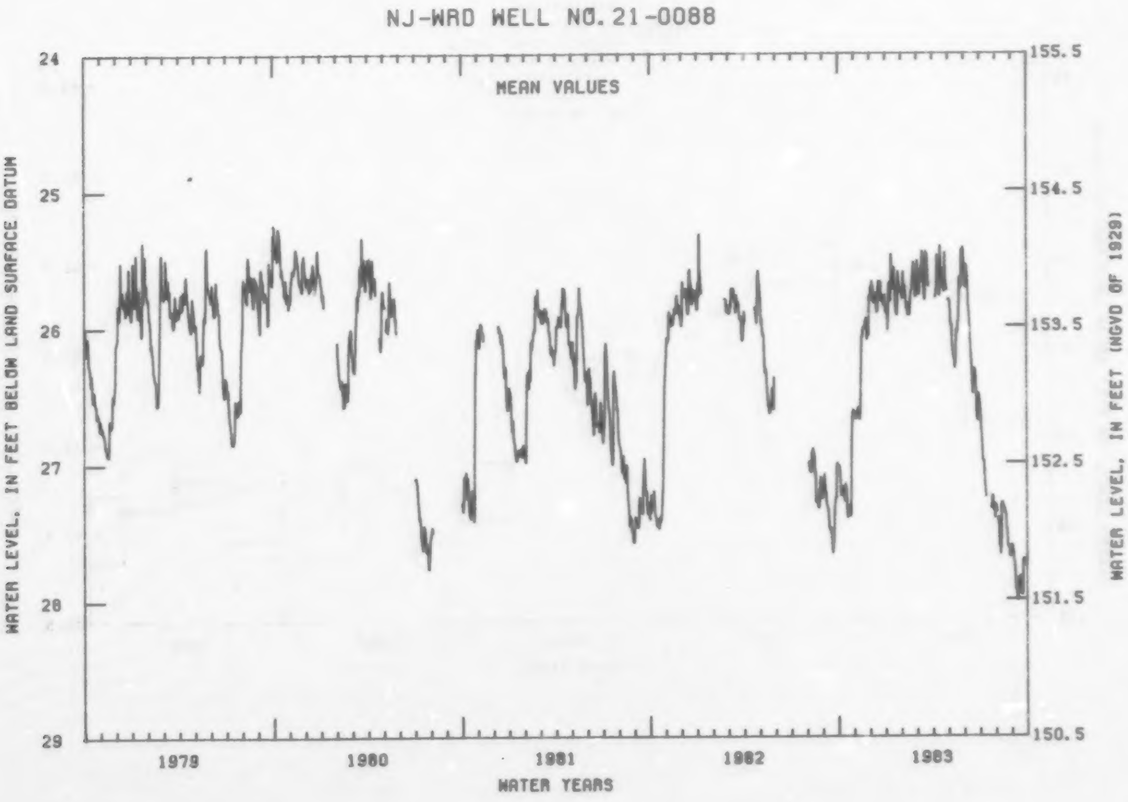
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 24.63 ft below land-surface datum, July 21, 1967; lowest, 28.05 ft below land-surface datum, Sept. 12, 1983.

EXTREMES FOR CURRENT YEAR.--Highest water level, 25.19 ft below land-surface datum, Mar. 21; lowest, 28.05 ft below land-surface datum, Sept. 12.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	27.24	26.63	25.71	25.92	25.79	25.77	---	25.89	25.55	26.79	27.42	27.72
10	27.24	26.68	25.83	25.68	25.88	25.56	25.48	26.17	25.89	27.07	27.67	27.92
15	27.18	26.07	25.89	25.57	25.92	25.72	25.74	26.28	26.24	---	27.31	27.88
20	27.34	26.01	25.67	25.89	25.73	25.63	25.62	25.97	26.45	---	27.38	27.97
25	27.26	26.10	25.81	25.67	25.66	---	25.46	25.73	26.60	27.24	27.62	27.72
EOM	26.64	25.81	25.90	25.76	25.77	---	---	25.50	26.53	27.30	27.60	27.66
MEAN	27.14	26.27	25.78	25.76	25.76	25.64	25.66	25.90	26.15	27.08	27.48	27.81

WTR YR 1983 MEAN 26.38 HIGH 25.41 APR 16 LOW 28.01 SEP 12

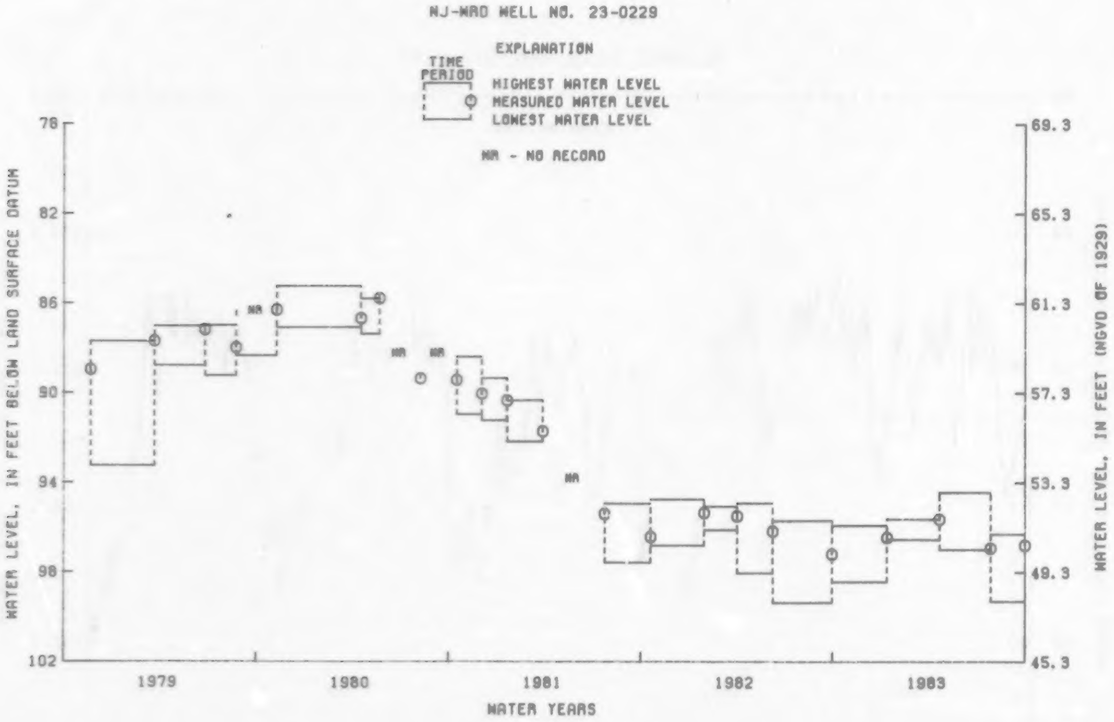


MIDDLESEX COUNTY

402015074275702. Local I.D., Forsgate 4 Obs.. NJ-WRD Well Number, 23-0229.
LOCATION.--Lat 40°20'15", long 74°27'57", Hydrologic Unit 02030105, on Hanover Lane at Rossmoor, Monroe Township. Owner: Monroe Township Municipal Utilities Authority.
AQUIFER.--Farrington aquifer, Potomac-Raritan-Magothy aquifer system of Cretaceous age.
WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 6 in, depth 330 ft, screened 319 to 330 ft.
INSTRUMENTATION.--Water-level extremes recorder, January 1977 to current year. Water-level recorder, April 1965 to August 1967, August 1968 to August 1975.
DATUM.--Land-surface datum is 147.34 ft above National Geodetic Vertical Datum of 1929. Measuring point: Front edge of cutout in recorder housing, 1.50 ft below land-surface datum.
PERIOD OF RECORD.--April 1965 to August 1967, August 1968 to August 1975, January 1977 to current year. Records for 1965 to 1975 are unpublished and are available in files of New Jersey District Office.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 80.09 ft below land-surface datum, July 16, 1973; lowest, 99.36 ft below land-surface datum, between June 8 and Sept. 29, 1982.
EXTREMES FOR CURRENT YEAR.--Highest water level, 94.44 ft below land-surface datum, between Apr. 21 and July 27; lowest, 99.31 ft below land-surface datum, between July 27 and Sept. 30.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

WATER-LEVEL EXTREMES			MEASURED WATER LEVEL	
PERIOD	HIGHEST WATER LEVEL	LOWEST WATER LEVEL	DATE	WATER LEVEL
SEPT. 29, 1982 TO JAN. 12, 1983	95.92	98.44	JAN. 12, 1983	96.46
JAN. 12, 1983 TO APR. 21, 1983	95.64	96.55	APR. 21, 1983	95.64
APR. 21, 1983 TO JULY 27, 1983	94.44	97.00	JULY 27, 1983	96.93
JULY 27, 1983 TO SEPT. 30, 1983	96.30	99.31	SEPT. 30, 1983	96.80



MIDDLESEX COUNTY

402015074275701. Local I.D., Forsgate 3 Obs. NJ-WRD Well Number, 23-0228.

LOCATION.--Lat 40°20'15", long 74°27'57", Hydrologic Unit 02030105, on Hanover Lane at Rossmoor, Monroe Township. Owner: Monroe Township Municipal Utilities Authority.

AQUIFER.--Old Bridge aquifer, Potomac-Raritan-Magothy aquifer system of Cretaceous age.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 6 in, depth 138 ft, screened 128 to 138 ft.

INSTRUMENTATION.--Water-level extremes recorder, January 1977 to current year. Water-level recorder, October 1961 to August 1967, August 1968 to August 1975.

DATUM.--Land-surface datum is 147.34 ft above National Geodetic Vertical Datum of 1929. Measuring point: Front edge of cutout in recorder housing, 1.40 ft below land-surface datum.

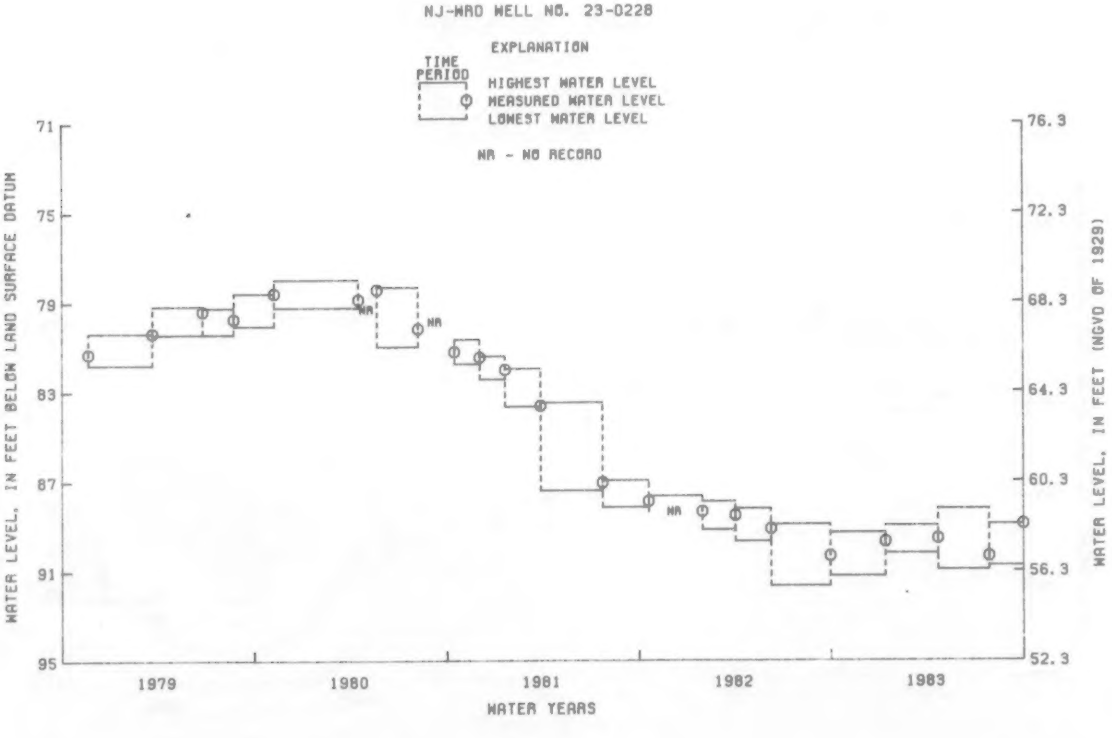
PERIOD OF RECORD.--October 1961 to August 1967, August 1968 to August 1975, January 1977 to current year. Records for 1961 to 1975 are unpublished and are available in files of New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 70.32 ft below land-surface datum, May 6, 1962; lowest, 91.66 ft below land-surface datum, between June 8 and Sept. 29, 1982.

EXTREMES FOR CURRENT YEAR.--Highest water level, 88.22 ft below land-surface datum, between Apr. 21 and July 27; lowest, 91.22 ft below land-surface datum, between Sept. 29, 1982 and Jan. 12, 1983.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

WATER-LEVEL EXTREMES			MEASURED WATER LEVEL	
PERIOD	HIGHEST WATER LEVEL	LOWEST WATER LEVEL	DATE	WATER LEVEL
SEPT. 29, 1982 TO JAN. 12, 1983	89.28	91.22	JAN. 12, 1983	89.69
JAN. 12, 1983 TO APR. 21, 1983	88.96	90.21	APR. 21, 1983	89.54
APR. 21, 1983 TO JULY 27, 1983	88.22	90.94	JULY 27, 1983	90.34
JULY 27, 1983 TO SEPT. 30, 1983	88.90	90.76	SEPT. 30, 1983	88.90



MIDDLESEX COUNTY

402109074301301. Local I.D., Forsgate 1 Obs. NJ-WRD Well Number, 23-0291.

LOCATION.--Lat 40°21'09", long 74°30'13", Hydrologic Unit 02030105, about 0.4 mi west of Route 130 on Friendship Road, South Brunswick Township.

Owner: Monroe Township Municipal Utilities Authority.

AQUIFER.--Farrington aquifer, Potomac-Raritan-Magothy aquifer system of Cretaceous age.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 6 in, depth 203 ft, screened 192 to 203 ft.

INSTRUMENTATION.--Water-level extremes recorder, January 1977 to current year. Water-level recorder, April 1965 to August 1975.

DATUM.--Land-surface datum is 106.79 ft above National Geodetic Vertical Datum of 1929.

Measuring point: Front edge of cutout in recorder housing, 2.06 ft above land-surface datum.

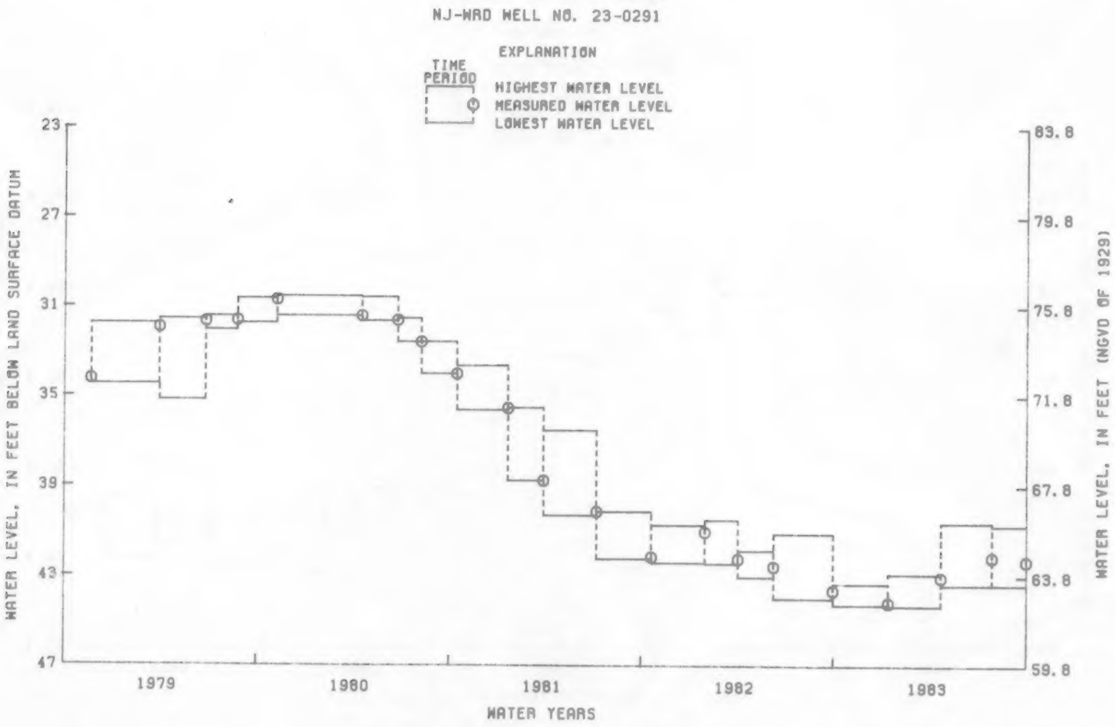
PERIOD OF RECORD.--April 1965 to August 1975, January 1977 to current year. Records for 1965 to 1975 are unpublished and are available in files of New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 24.70 ft below land-surface datum, July 5, 1973; lowest, 44.31 ft below land-surface datum, between Jan. 12 and Apr. 21, 1983.

EXTREMES FOR CURRENT YEAR.--Highest water level, 40.60 ft below land-surface datum, between Apr. 21 and July 27; lowest, 44.31 ft below land-surface datum, between Jan. 12 and Apr. 21.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

WATER-LEVEL EXTREMES			MEASURED WATER LEVEL	
PERIOD	HIGHEST WATER LEVEL	LOWEST WATER LEVEL	DATE	WATER LEVEL
SEPT. 29, 1982 TO JAN. 12, 1983	43.32	44.26	JAN. 12, 1983	44.16
JAN. 12, 1983 TO APR. 21, 1983	42.88	44.31	APR. 21, 1983	43.02
APR. 21, 1983 TO JULY 27, 1983	40.60	43.37	JULY 27, 1983	42.13
JULY 27, 1983 TO SEPT. 30, 1983	40.73	43.37	SEPT. 30, 1983	42.31



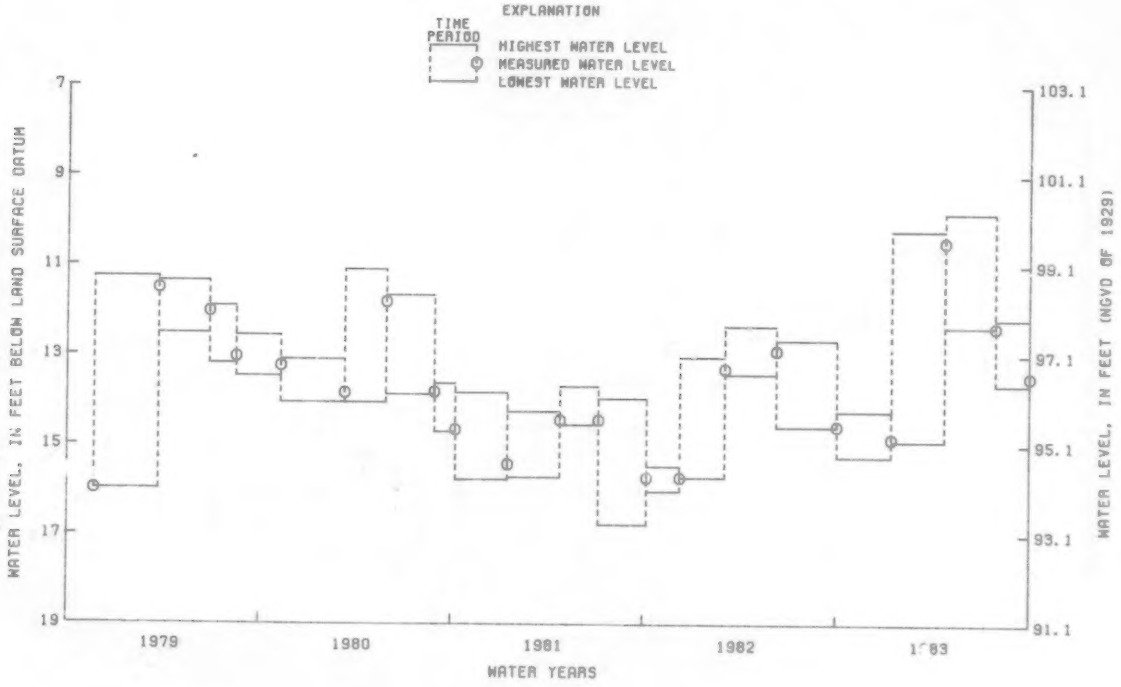
MIDDLESEX COUNTY

402122074184601. Local I.D., Hulsart Obs. NJ-WRD Well Number, 23-0516.
LOCATION.--Lat 40°21'23", long 74°18'49", Hydrologic Unit 02030105, on the east side of Marlboro Road, 0.4 mi southeast of Texas Road, Old Bridge Township.
Owner: Walter Novak.
AQUIFER.--Englishtown aquifer of Cretaceous age.
WELL CHARACTERISTICS.--Dug water-table observation well, diameter 4.5 ft, depth 19 ft, lined with concrete blocks.
INSTRUMENTATION.--Water-level extremes recorder, January 1977 to current year. Water-level recorder, June 1936 to December 1976.
DATUM.--Land-surface datum is 110.06 ft above National Geodetic Vertical Datum of 1929.
Measuring point: Top of angle iron at bottom of shelter doors, 1.80 ft above land-surface datum.
PERIOD OF RECORD.--June 1936 to current year. Records for 1975 to 1981 are unpublished and are available in files of New Jersey District Office.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 9.40 ft below land-surface datum, July 20, 1972; lowest, 16.78 ft below land-surface datum, between July 6 and Oct. 6, 1981.
EXTREMES FOR CURRENT YEAR.--Highest water level, 9.83 ft below land-surface datum, between Apr. 22 and July 27; lowest, 15.27 ft below land-surface datum, between Oct. 1 and Jan. 12.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

WATER-LEVEL EXTREMES			MEASURED WATER LEVEL	
PERIOD	HIGHEST WATER LEVEL	LOWEST WATER LEVEL	DATE	WATER LEVEL
OCT. 1, 1982 TO JAN. 12, 1983	14.25	15.27	JAN. 12, 1983	14.86
JAN. 12, 1983 TO APR. 22, 1983	10.22	14.92	APR. 22, 1983	10.48
APR. 22, 1983 TO JULY 27, 1983	9.83	12.37	JULY 27, 1983	12.37
JULY 27, 1983 TO SEPT. 30, 1983	12.19	13.66	SEPT. 30, 1983	13.48

NJ-WRD WELL NO. 23-0516



MIDDLESEX COUNTY

402450074181801. Local I.D., Browntown Obs. NJ-WRD Well Number, 23-0182.

LOCATION.--Lat 40°24'49", long 74°18'19", Hydrologic Unit 02030105, on the east side of Route 9, about 1.0 mi north of Browntown.

Owner: Old Bridge Municipal Utilities Authority.

AQUIFER.--Old Bridge aquifer, Potomac-Raritan-Magothy aquifer system of Cretaceous age.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 6 in, depth 71 ft, perforated pipe 66 to 71 ft.

INSTRUMENTATION.--Water-level extremes recorder, January 1977 to current year. Water-level recorder, November 1932 to August 1975.

DATUM.--Land-surface datum is 30.58 ft above National Geodetic Vertical Datum of 1929.

Measuring point: Front edge of cutout in recorder housing, 3.17 ft above land-surface datum.

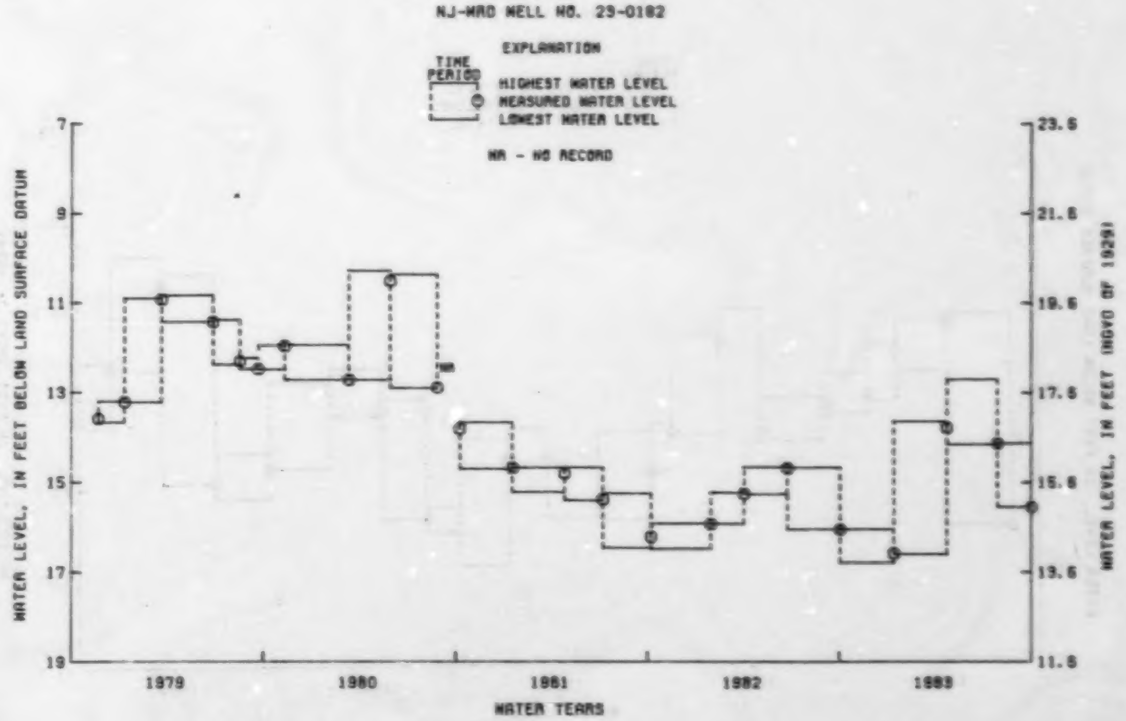
PERIOD OF RECORD.--November 1932 to August 1975, January 1977 to current year. Records for 1932 to 1975 are unpublished and are available in files of New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 2.44 ft below land-surface datum, Apr. 9-10, 1939; lowest, 16.79 ft below land-surface datum, between Oct. 1, 1982 and Jan. 12, 1983.

EXTREMES FOR CURRENT YEAR.--Highest water level, 12.70 ft below land-surface datum, between Apr. 22 and July 27; lowest, 16.79 ft below land-surface datum, between Oct. 1 and Jan. 12.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

WATER-LEVEL EXTREMES			MEASURED WATER LEVEL	
PERIOD	HIGHEST WATER LEVEL	LOWEST WATER LEVEL	DATE	WATER LEVEL
OCT. 1, 1982 TO JAN. 12, 1983	16.05	16.79	JAN. 12, 1983	16.59
JAN. 12, 1983 TO APR. 22, 1983	13.64	16.60	APR. 22, 1983	13.78
APR. 22, 1983 TO JULY 27, 1983	12.70	14.15	JULY 27, 1983	14.13
JULY 27, 1983 TO SEPT. 30, 1983	14.13	15.55	SEPT. 30, 1983	15.55



MIDDLESEX COUNTY

402553074271701. Local I.D., Robert Fischer Obs. NJ-WRD Well Number, 23-0070.

LOCATION.--Lat 40°25'55", long 74°27'19", Hydrologic Unit 02030105, about 1,800 ft southeast of Weber School on Hardenburg Lane, East Brunswick Township.

Owner: Robert D. Fischer.

AQUIFER.--Farrington aquifer, Potomac-Raritan-Magothy aquifer system of Cretaceous age.

WELL CHARACTERISTICS.--Dug water-table observation well, diameter 4.5 ft, depth 21 ft, cased to 17 ft.

INSTRUMENTATION.--Water-level extremes recorder, January 1977 to current year. Water-level recorder, June 1936 to April 1975.

DATUM.--Land-surface datum is 73.00 ft above National Geodetic Vertical Datum of 1929.

Measuring point: Top of angle iron at bottom of shelter doors, 1.70 ft above land-surface datum.

REMARKS.--Well deepened October 29, 1965 from 17 to 21 ft.

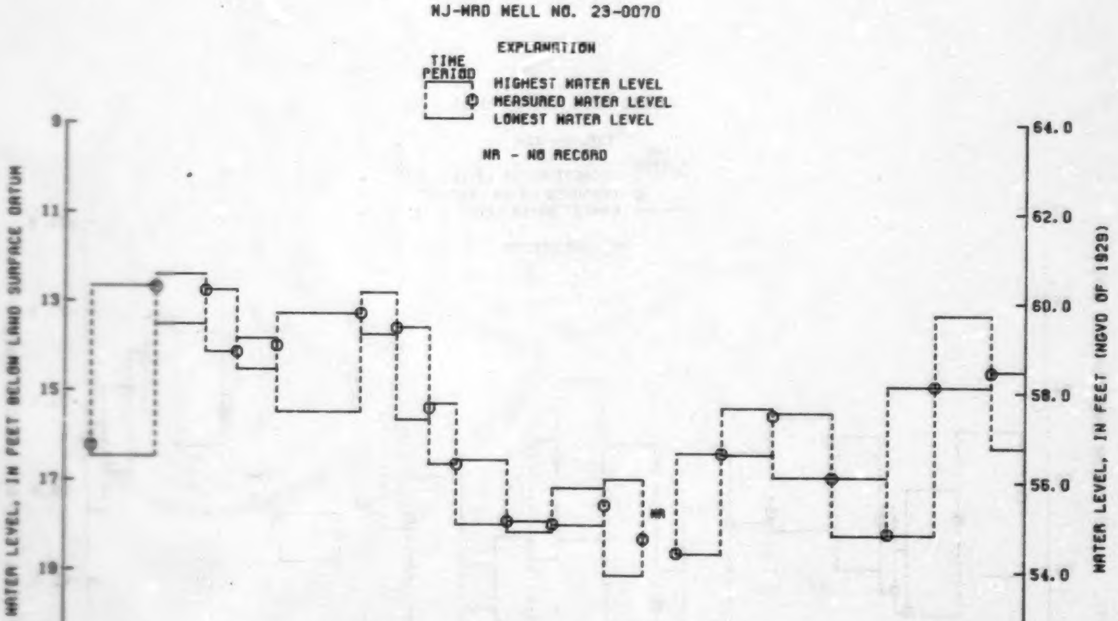
PERIOD OF RECORD.--June 1936 to April 1975, January 1977 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 8.88 ft below land-surface datum, Apr. 26-27, 1939; lowest, 19.11 ft below land-surface datum, between July 24 and Oct. 6, 1981; well was dry many times, 1963-1965 before deepening.

EXTREMES FOR CURRENT YEAR.--Highest water level, 13.27 ft below land-surface datum, between Apr. 11 and July 27; lowest, 18.20 ft below land-surface datum, between Sept. 29, 1982 and Jan. 12, 1983.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

WATER-LEVEL EXTREMES			MEASURED WATER LEVEL	
PERIOD	HIGHEST WATER LEVEL	LOWEST WATER LEVEL	DATE	WATER LEVEL
SEPT. 29, 1982 TO JAN. 12, 1983	16.91	18.20	JAN. 12, 1983	18.16
JAN. 12, 1983 TO APR. 11, 1983	14.87	18.18	APR. 11, 1983	14.87
APR. 11, 1983 TO JULY 27, 1983	13.27	14.88	JULY 27, 1983	14.55
JULY 27, 1983 TO OCT. 1, 1983	14.53	16.24	OCT. 1, 1983	16.24



MIDDLESEX COUNTY

402633074220001. Local I.D., South River 2 Obs. NJ-WRD Well Number, 23-0439.

LOCATION.--Lat 40°26'33", long 74°22'00", Hydrologic Unit 02030105, at the corner of Whitehead Avenue and Anne Street, South River.

Owner: South River Utilities.

AQUIFER.--Farrington aquifer, Potomac-Raritan-Magothy aquifer system of Cretaceous age.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 6 in, depth 126 ft, screened 121 to 126 ft.

INSTRUMENTATION.--Water-level extremes recorder, January 1977 to current year. Water-level recorder, January 1968 to August 1975.

DATUM.--Land-surface datum is 20.69 ft above National Geodetic Vertical Datum of 1929.

Measuring point: Front edge of cutout in recorder housing, 2.55 ft above land-surface datum.

REMARKS.--Water level affected by nearby pumping. Water-quality records for 1983 are published elsewhere in this report.

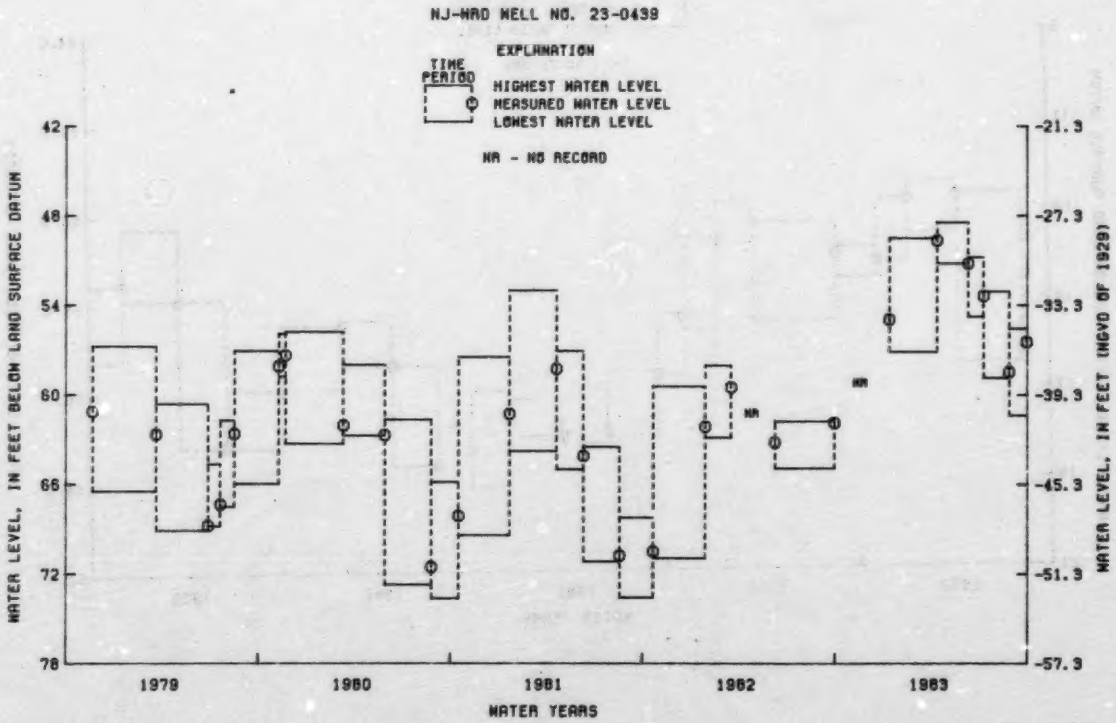
PERIOD OF RECORD.--January 1968 to August 1975, January 1977 to current year. Records for 1968 to 1975 are unpublished and are available in files of New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 39.37 ft below land-surface datum, Jan. 30, 1968; lowest, 73.64 ft below land-surface datum, between Aug. 25 and Oct. 16, 1980.

EXTREMES FOR CURRENT YEAR.--Highest water level, 48.44 ft below land-surface datum, between Apr. 11 and June 9; lowest, 61.40 ft below land-surface datum, between Aug. 26 and Sept. 28.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

WATER-LEVEL EXTREMES			MEASURED WATER LEVEL	
PERIOD	HIGHEST WATER LEVEL	LOWEST WATER LEVEL	DATE	WATER LEVEL
SEPT. 29, 1982 TO JAN. 11, 1983	---	---	JAN. 11, 1983	54.96
JAN. 11, 1983 TO APR. 11, 1983	49.50	57.12	APR. 11, 1983	49.65
APR. 11, 1983 TO JUNE 9, 1983	48.44	51.21	JUNE 9, 1983	51.21
JUNE 9, 1983 TO JULY 8, 1983	50.79	54.76	JULY 8, 1983	53.37
JULY 8, 1983 TO AUG. 26, 1983	53.07	58.86	AUG. 26, 1983	58.47
AUG. 26, 1983 TO SEPT. 28, 1983	55.57	61.40	SEPT. 28, 1983	56.47



MIDDLESEX COUNTY

403242074161701. Local I.D., American Cyanamid 1 Obs. NJ-WRD Well Number, 23-0482.

LOCATION.--Lat 40°32'42", long 74°16'17", Hydrologic Unit 02030104, at rear of plant near Cutters Dock Road, Woodbridge Township.
Owner: American Cyanamid Company.

AQUIFER.--Farrington aquifer, Potomac-Raritan-Magothy aquifer system of Cretaceous age.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 6 in, depth 76 ft, screened 44 to 54 ft and 64 to 76 ft.

INSTRUMENTATION.--Water-level extremes recorder, January 1977 to current year. Water-level recorder, October 1950 to June 1970.

DATUM.--Land-surface datum is 11.00 ft above National Geodetic Vertical Datum of 1929.
Measuring point: Front edge of cutout in recorder housing, 2.12 ft above land-surface datum.

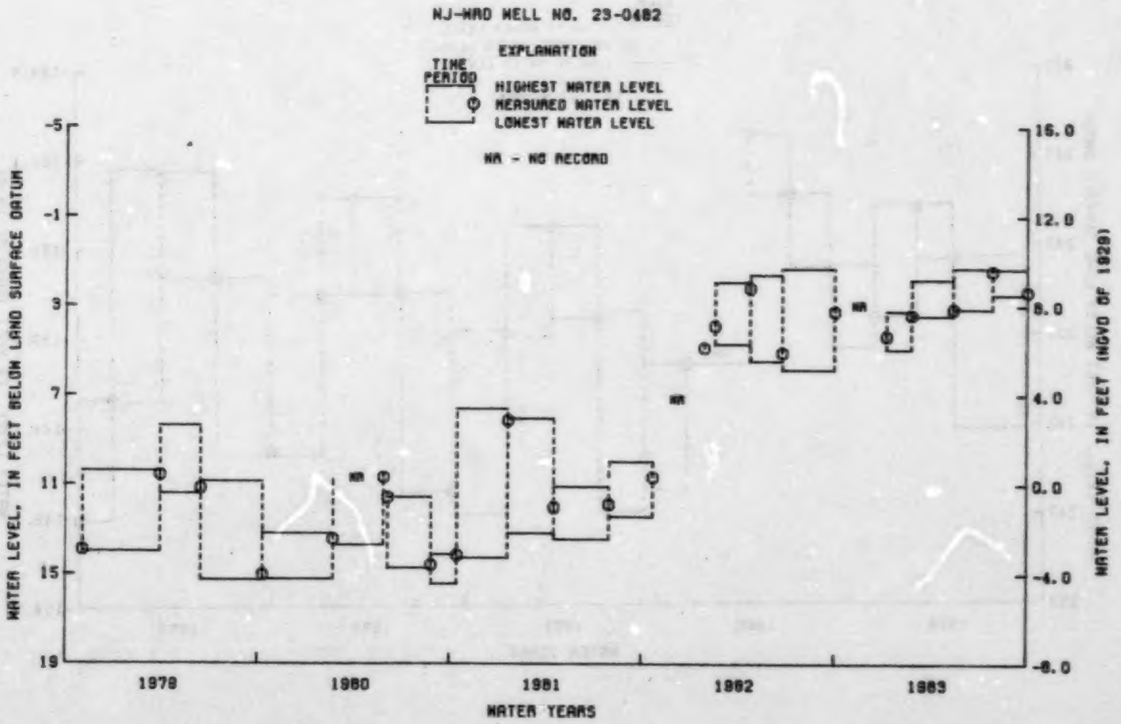
PERIOD OF RECORD.--October 1950 to June 1970, January 1977 to current year. Periodic manual measurements, July 1970 to June 1975. Records for 1950 to 1982 are unpublished and are available in files of New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 1.30 ft below land-surface datum, between May 12 and July 26, 1983; lowest, 15.43 ft below land-surface datum, between Aug. 26 and Oct. 14, 1980.

EXTREMES FOR CURRENT YEAR.--Highest water level, 1.30 ft below land-surface datum, between May 12 and July 26; lowest, 4.95 ft below land-surface datum, between Jan. 6 and Feb. 23.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

WATER-LEVEL EXTREMES PERIOD	HIGHEST WATER LEVEL	LOWEST WATER LEVEL	MEASURED WATER LEVEL DATE	WATER LEVEL
SEPT. 30, 1982 TO JAN. 6, 1983	---	---	JAN. 6, 1983	4.36
JAN. 6, 1983 TO FEB. 23, 1983	3.22	4.95	FEB. 23, 1983	3.40
FEB. 23, 1983 TO MAY 12, 1983	1.82	3.44	MAY 12, 1983	3.14
MAY 12, 1983 TO JULY 26, 1983	1.30	3.14	JULY 26, 1983	1.43
JULY 26, 1983 TO SEPT. 30, 1983	1.33	2.50	SEPT. 30, 1983	2.36



MONMOUTH COUNTY

400832074082101. Local I.D., Allaire State Park C Obs. NJ-WRD Well Number, 25-0429.

LOCATION.--Lat 40°08'34", long 74°08'34", Hydrologic Unit 02040301, about 1.3 mi southeast of Lower Squankum, in Allaire State Park, Wall Township.
Owner: U.S. Geological Survey.

AQUIFER.--Englishtown aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 6 in, depth 715 ft, screened 623 to 633 ft.

INSTRUMENTATION.--Water-level extremes recorder, February 1977 to current year. Water-level recorder, January 1964 to July 1975.

DATUM.--Land-surface datum is 97.93 ft above National Geodetic Vertical Datum of 1929.
Measuring point: Front edge of cutout in recorder housing, 1.64 ft above land-surface datum.

PERIOD OF RECORD.--January 1964 to July 1975, February 1977 to current year. Records for 1964 to 1975 are unpublished and are available in files of New Jersey District Office.

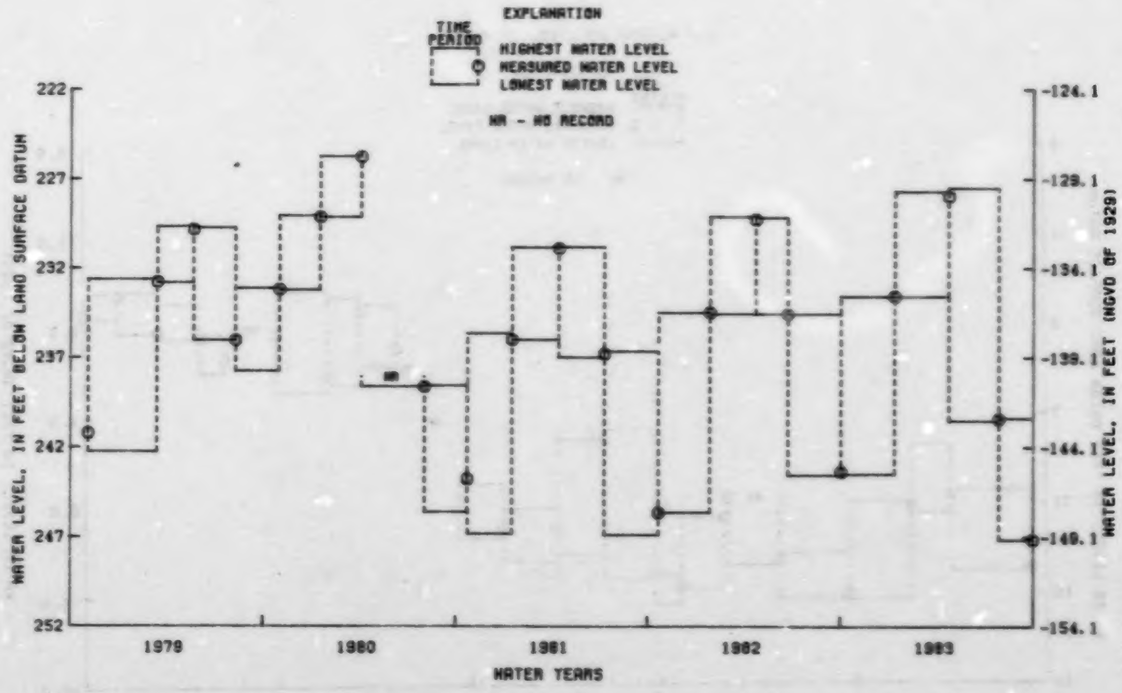
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 141.05 ft below land-surface datum, Apr. 8, 1964; lowest, 247.14 ft below land-surface datum, between July 26 and Sept. 29, 1983.

EXTREMES FOR CURRENT YEAR.--Highest water level, 227.49 ft below land-surface datum, between Apr. 22 and July 26; lowest, 247.14 ft below land-surface datum, between July 26 and Sept. 29.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

WATER-LEVEL EXTREMES			MEASURED WATER LEVEL	
PERIOD	HIGHEST WATER LEVEL	LOWEST WATER LEVEL	DATE	WATER LEVEL
OCT. 1, 1982 TO JAN. 11, 1983	233.56	243.49	JAN. 11, 1983	233.56
JAN. 11, 1983 TO APR. 22, 1983	227.69	233.57	APR. 22, 1983	227.95
APR. 22, 1983 TO JULY 26, 1983	227.49	240.51	JULY 26, 1983	240.40
JULY 26, 1983 TO SEPT. 29, 1983	240.36	247.14	SEPT. 29, 1983	247.14

NJ-WRD WELL NO. 25-0429



MONMOUTH COUNTY

401518074223001. Local I.D., Manalapan 1 Obs. NJ-WRD Well Number, 25-0216.
LOCATION.--Lat 40°15'18", long 74°22'30", Hydrologic Unit 02030105, on the north side of Route 33, about 1,600 ft west of Woodward Road, Manalapan Township.
Owner: Manalapan Township Water Department.
AQUIFER.--Englishtown aquifer of Cretaceous age.
WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 8 in, depth 185 ft, screened 113 to 136 ft and 158 to 174 ft.
INSTRUMENTATION.--Water-level extremes recorder, January 1977 to current year. Water-level recorder, April 1971 to July 1975.
DATUM.--Land-surface datum is 122.11 ft above National Geodetic Vertical Datum of 1929.
Measuring point: Front edge of cutout in recorder housing, 2.28 ft above land-surface datum.
PERIOD OF RECORD.--April 1971 to July 1975, January 1977 to current year. Records for 1971 to 1975 are unpublished and are available in files of New Jersey District Office.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 0.00 ft below land-surface datum, May 19-20, 1973; lowest, 4.68 ft below land-surface datum, between July 29 and Oct. 20, 1981.
EXTREMES FOR CURRENT YEAR.--Highest water level, 1.23 ft below land-surface datum, between Jan. 11 and May 13; lowest, 4.03 ft below land-surface datum, between Sept. 30, 1982 and Jan. 11, 1983.

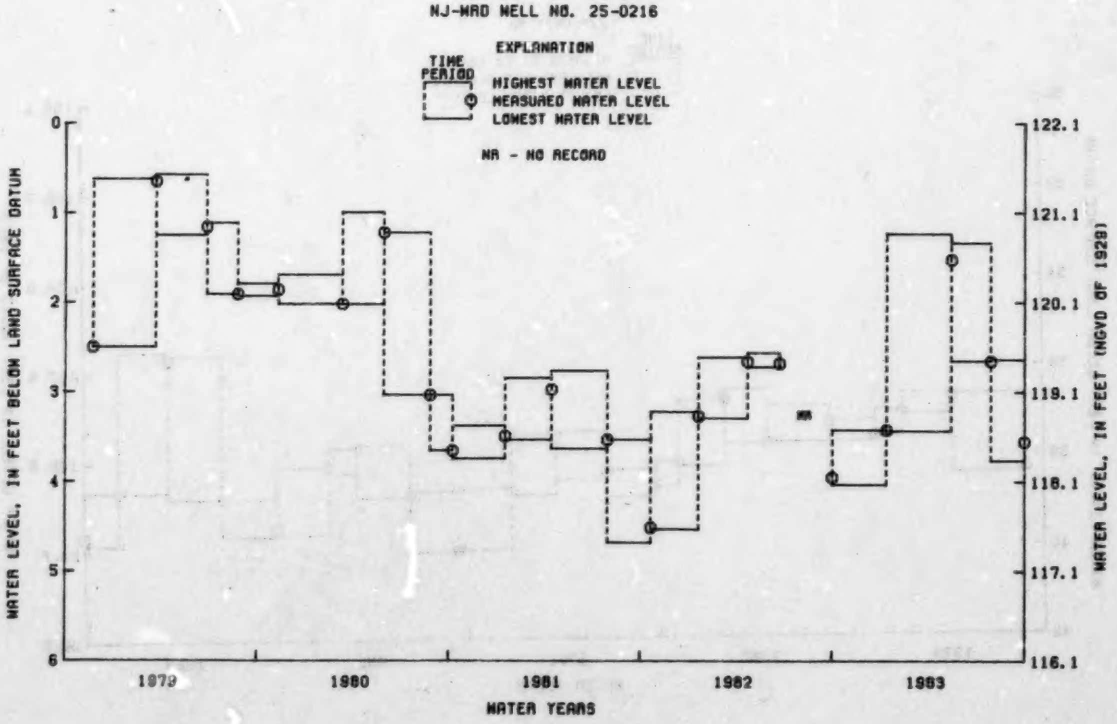
WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

WATER-LEVEL EXTREMES

PERIOD	HIGHEST WATER LEVEL	LOWEST WATER LEVEL
SEPT. 30, 1982 TO JAN. 11, 1983	3.42	4.03
JAN. 11, 1983 TO MAY 13, 1983	1.23	3.43
MAY 13, 1983 TO JULY 27, 1983	1.33	2.65
JULY 27, 1983 TO SEPT. 29, 1983	2.63	3.76

MEASURED WATER LEVEL

DATE	WATER LEVEL
JAN. 11, 1983	3.42
MAY 13, 1983	1.52
JULY 27, 1983	2.65
SEPT. 29, 1983	3.55



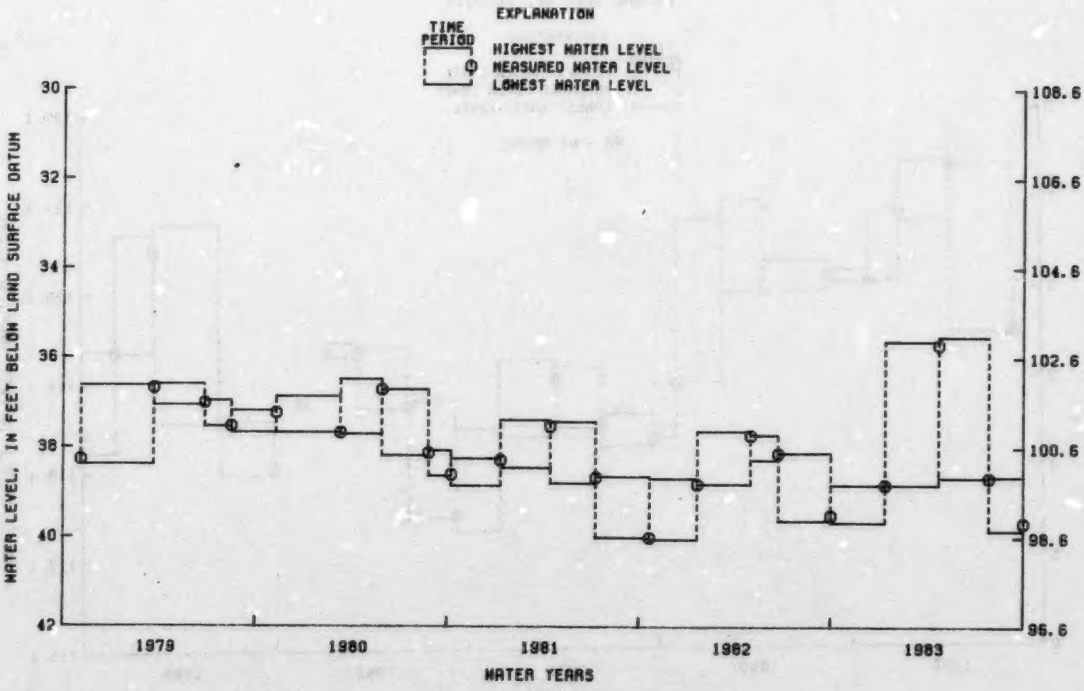
MONMOUTH COUNTY

401906074151401. Local I.D., Village 215 Obs. NJ-WRD Well Number, 25-0250.
LOCATION.--Lat 40°19'18", long 74°15'29", Hydrologic Unit 02030105, near intersection of River Drive and Newport Road, about 0.6 mi northwest of Route 79, in Marlboro.
Owner: Gordons Corner Water Company.
AQUIFER.--Englishtown aquifer of Cretaceous age.
WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 6 in, depth 215 ft, screened 185 to 215 ft.
INSTRUMENTATION.--Water-level extremes recorder, January 1977 to current year. Water-level recorder, April 1971 to July 1975.
DATUM.--Land-surface datum is 138.62 ft above National Geodetic Vertical Datum of 1929.
Measuring point: Front edge of cutout in recorder housing, 2.58 ft above land-surface datum.
PERIOD OF RECORD.--April 1971 to July 1975, January 1977 to current year. Records for 1971 to 1975 are unpublished and are available in files of New Jersey District Office.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 35.30 ft below land-surface datum, Jan. 9-10, 1972; lowest, 40.04 ft below land-surface datum, between Oct. 20 and Jan. 19, 1982.
EXTREMES FOR CURRENT YEAR.--Highest water level, 35.52 ft below land-surface datum, between Apr. 22 and July 26; lowest, 39.84 ft below land-surface datum, between July 26 and Sept. 30.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

WATER-LEVEL EXTREMES			MEASURED WATER LEVEL	
PERIOD	HIGHEST WATER LEVEL	LOWEST WATER LEVEL	DATE	WATER LEVEL
SEPT. 30, 1982 TO JAN. 11, 1983	38.82	39.66	JAN. 11, 1983	38.82
JAN. 11, 1983 TO APR. 22, 1983	35.62	38.82	APR. 22, 1983	35.70
APR. 22, 1983 TO JULY 26, 1983	35.52	38.66	JULY 26, 1983	38.66
JULY 26, 1983 TO SEPT. 30, 1983	38.64	39.84	SEPT. 30, 1983	39.67

NJ-WRD WELL NO. 25-0250



MONMOUTH COUNTY

402208074145201. Local I.D., Marlboro 1 Obs. NJ-WRD Well Number, 25-0272.

LOCATION.--Lat 40°22'08", long 74°14'52", Hydrologic Unit 02030104, on the west side of New Jersey Route 79, 0.9 mi south of Morganville.

Owner: Marlboro Township Municipal Utilities Authority.

AQUIFER.--Farrington aquifer, Potomac-Raritan-Magothy aquifer system of Cretaceous age.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 6 in, depth 680 ft, screened 670 to 680 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Land-surface datum is 116.93 ft above National Geodetic Vertical Datum of 1929.

Measuring point: Top edge of recorder shelf, 2.50 ft above land-surface datum.

REMARKS.--Water level affected by nearby pumping.

PERIOD OF RECORD.--January 1973 to July 1975, March 1977 to current year. Records for 1973 to 1977 are unpublished and are available in files of New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 144.06 ft below land-surface datum, Apr. 4, 1973; lowest, 190.49 ft below land-surface datum, July 29, 1983.

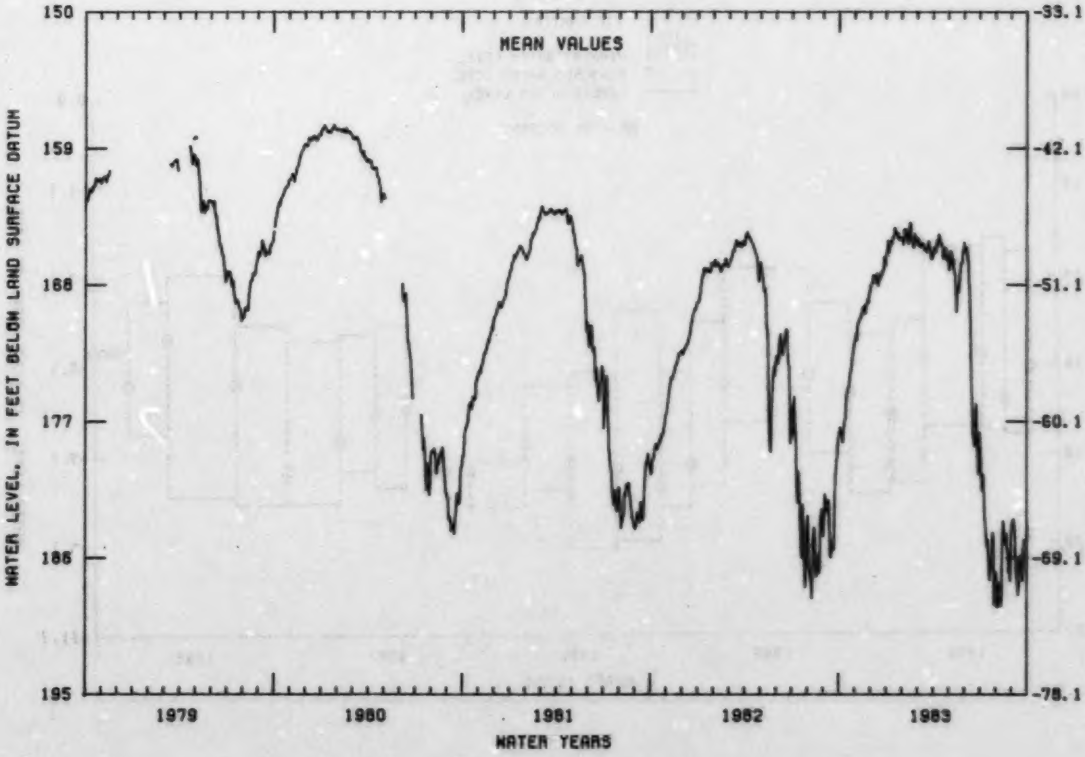
EXTREMES FOR CURRENT YEAR.--Highest water level, 163.68 ft below land-surface datum, Jan. 16; lowest, 190.49 ft below land-surface datum, July 29.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	178.04	170.52	167.36	165.40	164.95	165.39	165.84	165.91	165.79	181.53	188.63	184.15
10	177.05	170.26	167.76	165.30	165.22	165.31	164.99	167.02	169.46	183.66	189.19	187.46
15	175.12	169.53	167.82	164.25	164.00	165.69	165.38	169.81	176.46	185.35	183.89	186.31
20	174.24	169.56	167.19	164.79	165.51	165.54	165.76	167.95	178.07	186.29	184.42	187.43
25	172.92	169.23	166.69	165.03	164.89	165.77	165.75	166.53	178.82	184.35	186.97	185.05
EOM	171.57	168.13	165.71	164.95	165.33	165.85	166.97	165.74	178.26	186.92	183.76	183.83
MEAN	175.19	169.75	167.29	164.99	164.90	165.58	165.65	166.99	173.61	184.68	186.38	185.73

WTR YR 1983 MEAN 172.61 HIGH 163.90 FEB 14 LOW 189.26 AUG 3

NJ-WRD WELL NO. 25-0272



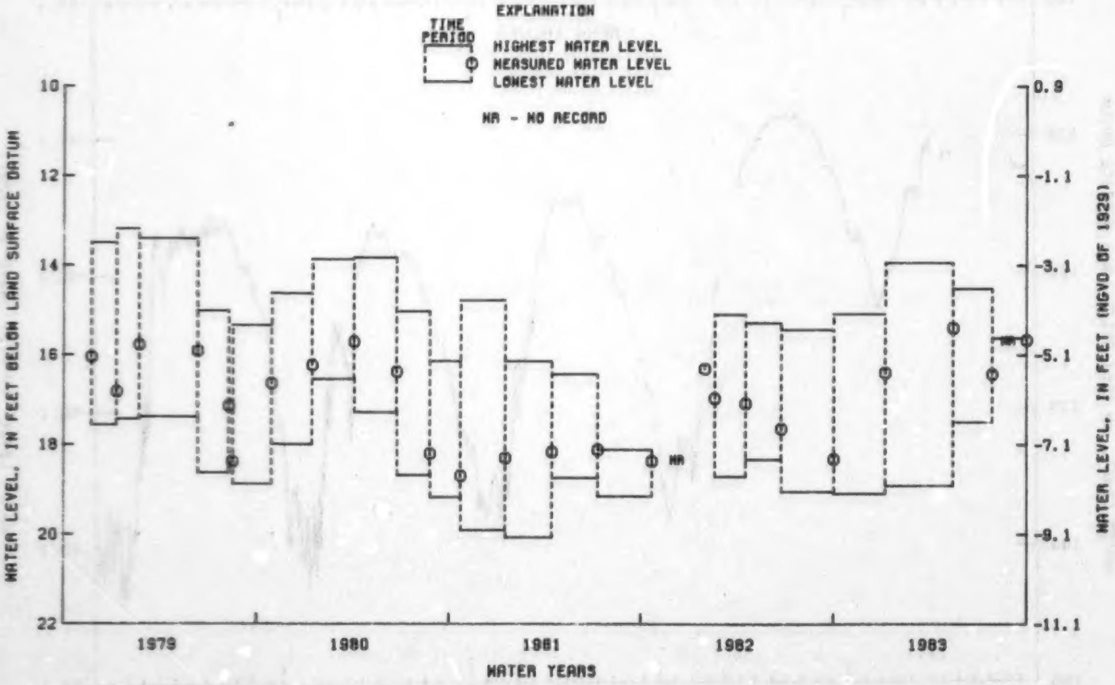
MONMOUTH COUNTY

402536073590501. Local I.D., Sandy Hook SP 1 Obs. NJ-WRD Well Number, 25-0316.
LOCATION.--Lat 40°25'36", long 73°59'05", Hydrologic Unit 02030104, about 1.9 mi north of the main entrance of Sandy Hook National Park, Middletown Township.
Owner: National Park Service.
AQUIFER.--Old Bridge aquifer, Potomac-Raritan-Magothy aquifer system of Cretaceous age.
WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 8 in, depth 397 ft, screened 371 to 397 ft.
INSTRUMENTATION.--Water-level extremes recorder, February 1977 to May 1978, November 1978 to current year. Water-level recorder, May 1965 to August 1975.
DATUM.--Land-surface datum is 10.91 ft above National Geodetic Vertical Datum of 1929.
Measuring point: Front edge of cutout in recorder housing, 1.20 ft above land-surface datum.
REMARKS.--Water level affected by tidal fluctuation.
PERIOD OF RECORD.--May 1965 to August 1975, February 1977 to May 1978, November 1978 to current year. Records for 1965 to 1975 are unpublished and are available in files of New Jersey District Office.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 8.99 ft below land-surface datum, Jan. 23, 1966; lowest, 20.12 ft below land-surface datum, between Sept. 7 and Nov. 2, 1977.
EXTREMES FOR CURRENT YEAR.--Highest water level, 13.94 ft below land-surface datum, between Jan. 6 and May 13; lowest, 19.10 ft below land-surface datum, between Sept. 30, 1982 and Jan. 6, 1983.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

WATER-LEVEL EXTREMES			MEASURED WATER LEVEL	
PERIOD	HIGHEST WATER LEVEL	LOWEST WATER LEVEL	DATE	WATER LEVEL
SEPT. 30, 1982 TO JAN. 6, 1983	15.09	19.10	JAN. 6, 1983	16.40
JAN. 6, 1983 TO MAY 13, 1983	13.94	18.92	MAY 13, 1983	15.40
MAY 13, 1983 TO JULY 26, 1983	14.52	17.50	JULY 26, 1983	16.43
JULY 26, 1983 TO SEPT. 29, 1983	15.62	---	SEPT. 29, 1983	15.67

NJ-WRD WELL NO. 25-0316



MONMOUTH COUNTY

402626074114204. Local I.D., Keyport Borough WD 4 Obs. NJ-WRD Well Number, 25-0206.

LOCATION.--Lat 40°26'25", long 74°11'45", Hydrologic Unit 02030104, at the unused Myrtle Avenue Water Plant, Keyport. Owner: Keyport Borough Water Department.

AQUIFER.--Old Bridge aquifer, Potomac-Raritan-Magothy aquifer system of Cretaceous age.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 8 in, depth 249 ft, screened 225 to 249 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Land-surface datum is 14.47 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top edge of recorder shelf, 2.30 ft above land-surface datum.

REMARKS.--Water level affected by tidal fluctuation.

PERIOD OF RECORD.--June 1978 to current year.

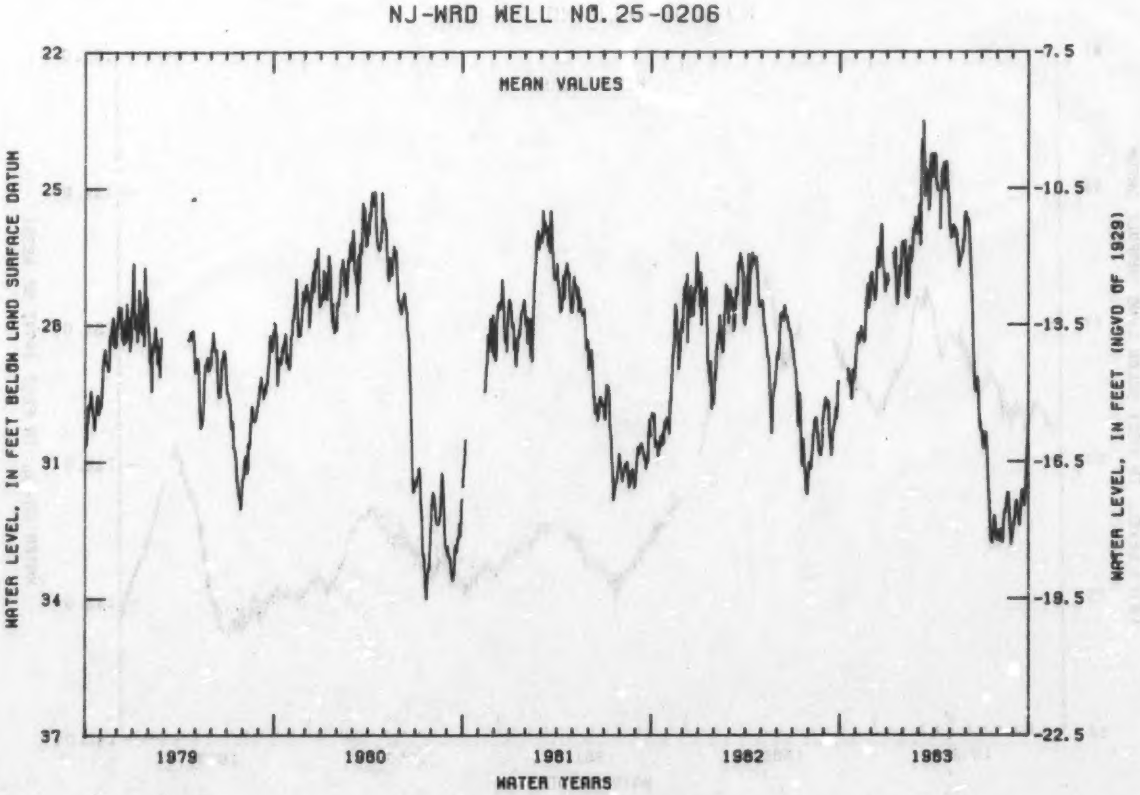
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 22.66 ft below land-surface datum, Mar. 27, 1983; lowest, 34.88 ft below land-surface datum, July 22, 1980.

EXTREMES FOR CURRENT YEAR.--Highest water level, 22.66 ft below land-surface datum, Mar. 27; lowest, 34.32 ft below land-surface datum, Aug. 11.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	28.30	27.30	---	27.37	26.25	24.94	25.83	25.70	30.72	32.74	32.02
10	---	28.04	26.78	---	27.25	23.53	---	25.99	26.62	30.41	32.77	32.17
15	---	28.31	26.75	26.31	26.41	24.57	24.77	26.28	28.54	31.65	32.06	32.02
20	29.25	27.44	25.83	27.48	25.97	24.65	24.90	26.60	29.47	32.71	31.71	31.82
25	29.00	27.64	26.95	26.93	25.73	24.27	24.63	26.43	29.48	32.31	32.29	31.32
EOM	28.70	27.03	26.89	26.32	26.02	24.40	25.73	25.52	30.34	32.66	32.53	30.15
MEAN	---	27.88	26.82	26.80	26.40	24.78	24.89	26.14	28.01	31.60	32.35	31.76

WTR YR 1983 MEAN 28.09 HIGH 23.53 MAR 10 LOW 32.82 AUG 28



MORRIS COUNTY

404639074230001. Local I.D., Briarwood School Obs. NJ-WRD Well Number, 27-0012.

LOCATION.--Lat 40°46'39", long 74°23'00", Hydrologic Unit 02030103, at Briarwood School near Florham Park.
Owner: U.S. Geological Survey.

AQUIFER.--Stratified drift of Pleistocene age.

WELL CHARACTERISTICS.--Drilled semi-artesian observation well, diameter 6 in, depth 110 ft, screened 100 to 110 ft.

INTRUMENTATION.--Water-level recorder.

DATUM.--Altitude of land-surface datum is 198 ft, by altimeter.
Measuring point: Top edge of recorder shelf, 3.00 ft above land-surface datum.

PERIOD OF RECORD.--March 1967 to May 1975, April 1977 to current year. Records for 1967 to 1975 are unpublished and are available in files of New Jersey District Office.

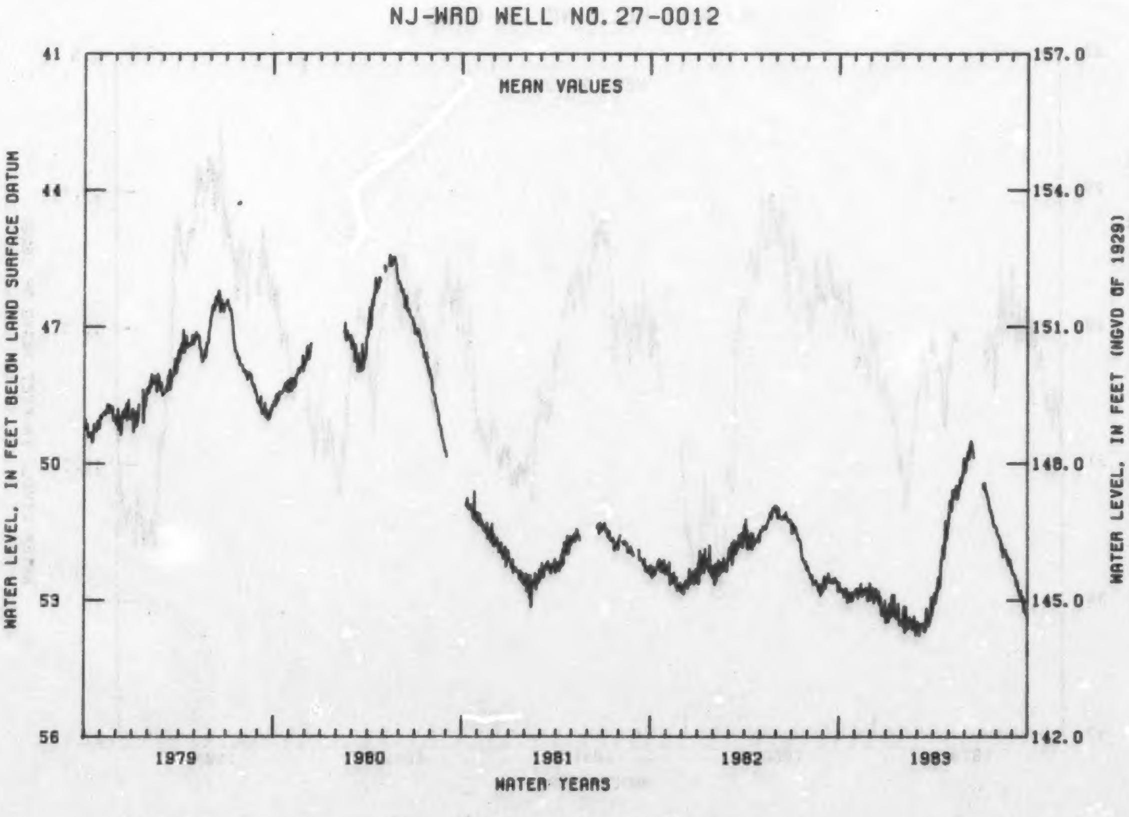
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 34.17 ft below land-surface datum, June 3, 1968; lowest, 53.81 ft below land-surface datum, Feb. 26, Mar. 3, and Mar. 5, 1983.

EXTREMES FOR CURRENT YEAR.--Highest water level, 49.48 ft below land-surface datum, June 12; lowest, 53.81 ft below land-surface datum, Feb. 26, Mar. 3, and Mar. 5.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	52.82	52.88	52.82	53.09	53.70	53.77	53.05	51.00	49.93	---	51.62	52.45
10	52.93	52.85	52.80	53.00	53.63	53.54	52.50	50.75	49.66	50.55	51.90	52.57
15	52.77	52.79	52.91	52.88	53.47	53.60	52.22	50.48	49.59	50.72	51.95	52.90
20	52.82	52.81	52.92	53.40	53.64	53.56	52.00	50.49	---	51.06	51.98	52.95
25	52.82	53.01	53.15	53.48	53.61	53.38	51.42	50.41	---	51.31	52.18	53.19
EOM	52.82	52.99	53.27	53.49	53.54	53.04	51.26	49.92	---	51.40	52.34	53.30
MEAN	52.86	52.81	53.01	53.28	53.51	53.47	52.24	50.57	---	50.94	51.92	52.85

WTR YR 1983 MEAN 52.37 HIGH 49.50 JUN 13 LOW 53.77 MAR 5



MORRIS COUNTY

404921074335601. Local I.D., Mount Freedom 2 Obs. NJ-WRD Well Number, 27-0023.

LOCATION.--Lat 40°49'21", long 74°33'56", Hydrologic Unit 02030103, 440 ft north of the intersection of Phyllis Place and Leonard Lane, Randolph Township.

Owner: Randolph Township Water Department.

AQUIFER.--Byram gneiss of Precambrian age.

WELL CHARACTERISTICS.--Drilled semi-artesian observation well, diameter 8 in, cased to 11 ft, depth 218 ft, open hole.

INSTRUMENTATION.--Water-level extremes recorder, April 1977 to current year. Water-level recorder, January 1964 to July 1970.

DATUM.--Altitude of land-surface datum is 800 ft, by altimeter.

Measuring point: Front edge of cutout in recorder housing, 4.79 ft above land-surface datum.

REMARKS.--Water level affected occasionally by nearby pumping.

PERIOD OF RECORD.--January 1964 to July 1970, April 1977 to current year. Periodic manual measurements, December 1970 to February 1975. Records for 1964 to 1981 are unpublished and are available in files of New Jersey District Office.

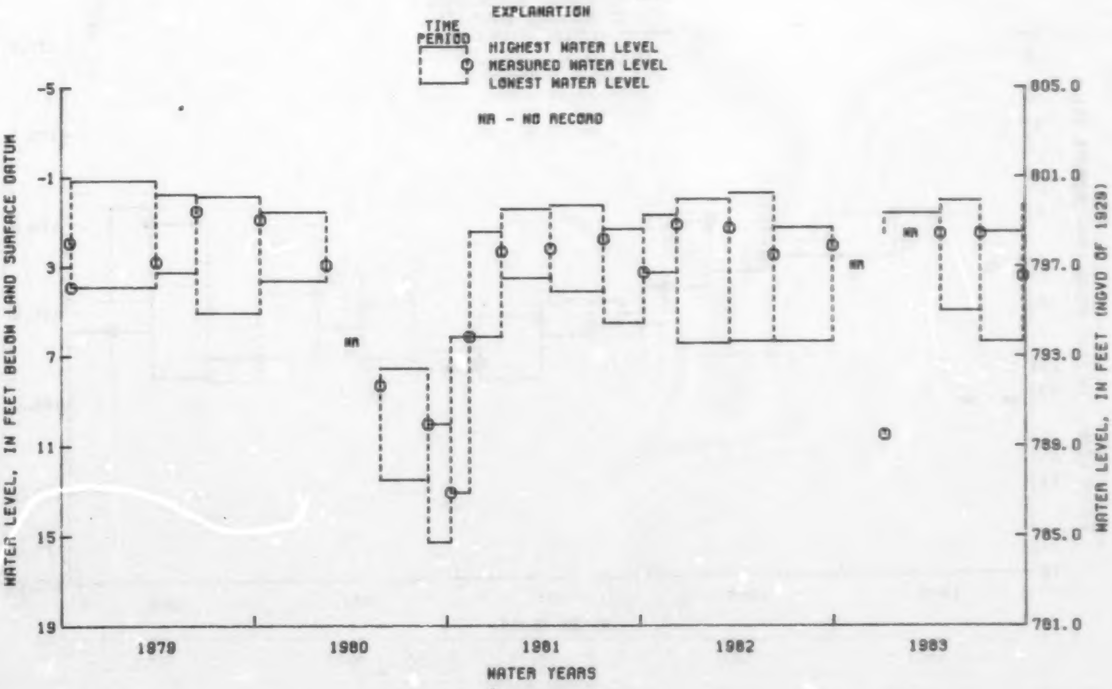
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 0.83 ft above land-surface datum, between Oct. 19, 1978 and Mar. 28, 1979; lowest, 15.29 ft below land-surface datum, between Aug. 26 and Oct. 8, 1980.

EXTREMES FOR CURRENT YEAR.--Highest water level, 0.07 ft below land-surface datum, between Apr. 21 and July 6; lowest measured, 10.53 ft below land-surface datum, Jan. 5.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

WATER-LEVEL EXTREMES			MEASURED WATER LEVEL	
PERIOD	HIGHEST WATER LEVEL	LOWEST WATER LEVEL	DATE	WATER LEVEL
SEPT. 29, 1982 TO JAN. 5, 1983	---	---	JAN. 5, 1983	10.53
JAN. 5, 1983 TO APR. 21, 1983	0.64	---	APR. 21, 1983	1.55
APR. 21, 1983 TO JULY 6, 1983	0.07	5.00	JULY 6, 1983	1.55
JULY 6, 1983 TO SEPT. 25, 1983	1.47	6.37	SEPT. 25, 1983	3.46

NJ-WRD WELL NO. 27-0023



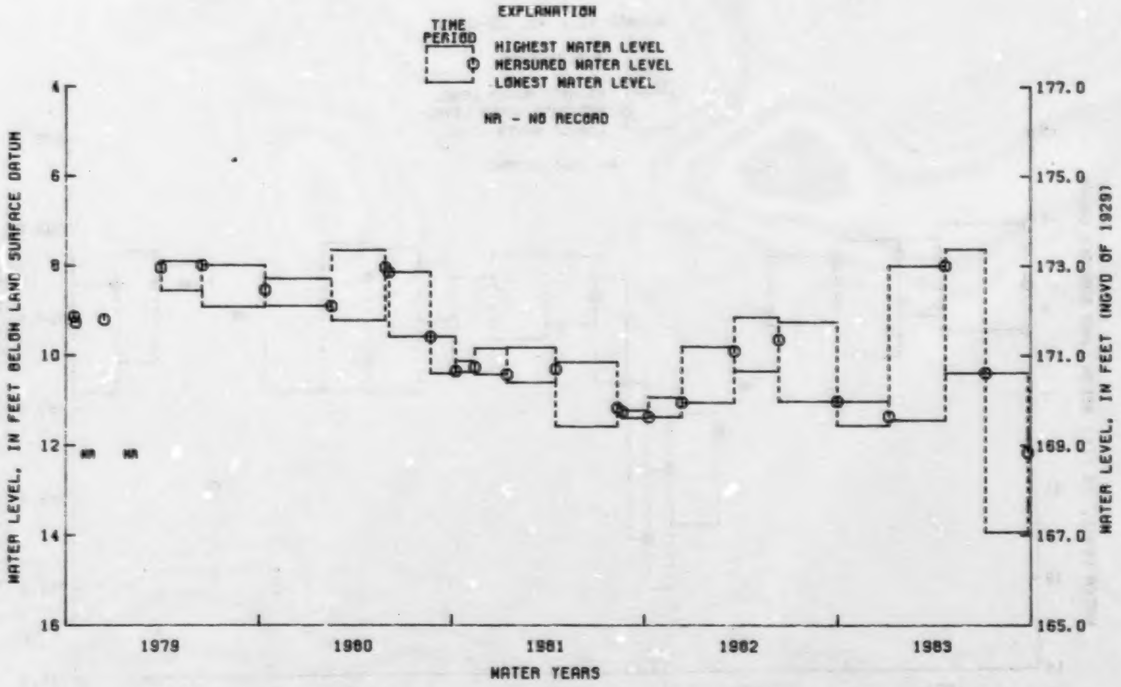
MORRIS COUNTY

404937074220001. Local I.D., Green Acres Obs. NJ-WRD Well Number, 27-0006.
LOCATION.--Lat 40°49'37", long 74°22'00", Hydrologic Unit 02030103, 65 ft northwest of the end of the paved portion of Weaver Place, East Hanover Township.
Owner: U.S. Geological Survey.
AQUIFER.--Stratified drift of Pleistocene age.
WELL CHARACTERISTICS.--Drilled semi-artesian observation well, diameter 6 in, depth 104 ft, screened 94 to 104 ft.
INSTRUMENTATION.--Water-level extremes recorder, April 1977 to current year. Water-level recorder, March 1967 to April 1975.
DATUM.--Altitude of land-surface datum is 181 ft, by altimeter.
Measuring point: Front edge of cutout in recorder housing, 4.16 ft above land-surface datum.
PERIOD OF RECORD.--March 1967 to April 1975, April 1977 to current year. Records for 1967 to 1981 are unpublished and are available in files of New Jersey District Office.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 4.15 ft below land-surface datum, Apr. 10, 1973; lowest, 13.93 ft below land-surface datum, between July 6 and Sept. 25, 1983.
EXTREMES FOR CURRENT YEAR.--Highest water level, 7.63 ft below land-surface datum, between Apr. 21 and July 6; lowest, 13.93 ft below land-surface datum, between July 6 and Sept. 25.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

WATER-LEVEL EXTREMES			MEASURED WATER LEVEL	
PERIOD	HIGHEST WATER LEVEL	LOWEST WATER LEVEL	DATE	WATER LEVEL
SEPT. 29, 1982 TO JAN. 5, 1983	11.02	11.56	JAN. 5, 1983	11.36
JAN. 5, 1983 TO APR. 21, 1983	8.00	11.44	APR. 21, 1983	8.00
APR. 21, 1983 TO JULY 6, 1983	7.63	10.39	JULY 6, 1983	10.39
JULY 6, 1983 TO SEPT. 25, 1983	10.39	13.93	SEPT. 25, 1983	12.16

NJ-WRD WELL NO. 27-0006

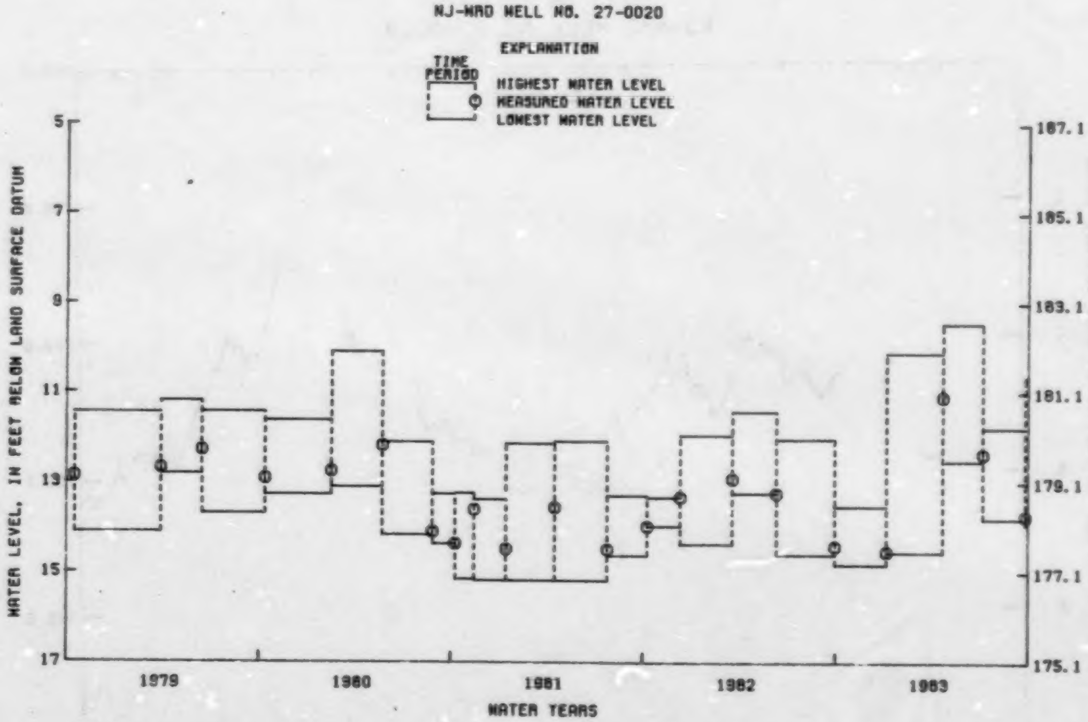


MORRIS COUNTY

405027074232301. Local I.D., Troy Meadows 1 Obs. NJ-WRD Well Number, 27-0020.
LOCATION.--Lat 40°50'27", long 74°23'23", Hydrologic Unit 02030103, on the east side of Beverwyck Road, 0.8 mi north of intersection with Troy Road, Parsippany-Troy Hills Township.
Owner: U.S. Geological Survey.
AQUIFER.--Stratified drift of Pleistocene age.
WELL CHARACTERISTICS.--Drilled semi-artesian observation well, diameter 6 in, depth 89 ft, screened 79 to 89 ft.
INSTRUMENTATION.--Water-level extremes recorder, April 1977 to current year. Water-level recorder, December 1965 to July 1970.
DATUM.--Land-surface datum is 192.07 ft above National Geodetic Vertical Datum of 1929.
Measuring point: Front edge of cutout in recorder housing, 3.32 ft above land-surface datum.
PERIOD OF RECORD.--December 1965 to July 1970, April 1977 to current year. Periodic manual measurements, December 1970 to February 1975. Records for 1965 to 1981 are unpublished and are available in files of New Jersey District Office.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 6.00 ft below land-surface datum, Mar. 15-16, 1967 and June 15, 1968; lowest, 15.77 ft below land-surface datum, between Feb. 10 and May 31, 1978.
EXTREMES FOR CURRENT YEAR.--Highest water level, 9.45 ft below land-surface datum, between Apr. 21 and July 6; lowest, 14.82 ft below land-surface datum, between Sept. 29, 1982 and Jan. 5, 1983.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

WATER-LEVEL EXTREMES			MEASURED WATER LEVEL	
PERIOD	HIGHEST WATER LEVEL	LOWEST WATER LEVEL	DATE	WATER LEVEL
SEPT. 29, 1982 TO JAN. 5, 1983	13.52	14.82	JAN. 5, 1983	14.53
JAN. 5, 1983 TO APR. 21, 1983	10.11	14.55	APR. 21, 1983	11.09
APR. 21, 1983 TO JULY 6, 1983	9.45	12.52	JULY 6, 1983	12.36
JULY 6, 1983 TO SEPT. 25, 1983	11.78	13.80	SEPT. 25, 1983	13.74



MORRIS COUNTY

410207074270001. Local I.D., Green Pond TW5 Obs. NJ-WRD Well Number, 27-0028.

LOCATION.--Lat 41°02'07", long 74°27'00", Hydrologic Unit 02030103, about 500 ft east of Route 513 and 1.1 mi south of intersection with Route 23, Rockaway Township.

Owner: State of New Jersey.

AQUIFER.--Stratified drift of Pleistocene age.

WELL CHARACTERISTICS.--Drilled semi-artesian observation well, diameter 6 in, depth 120 ft, screened 80 to 120 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Land-surface datum is 758.56 ft above National Geodetic Vertical Datum of 1929 (levels by Woodward-Clyde Consultants).

Measuring point: Top edge of recorder shelf, 1.20 ft above land-surface datum.

REMARKS.--Water-quality records for 1983 are published elsewhere in this report.

PERIOD OF RECORD.--November 1981 to current year.

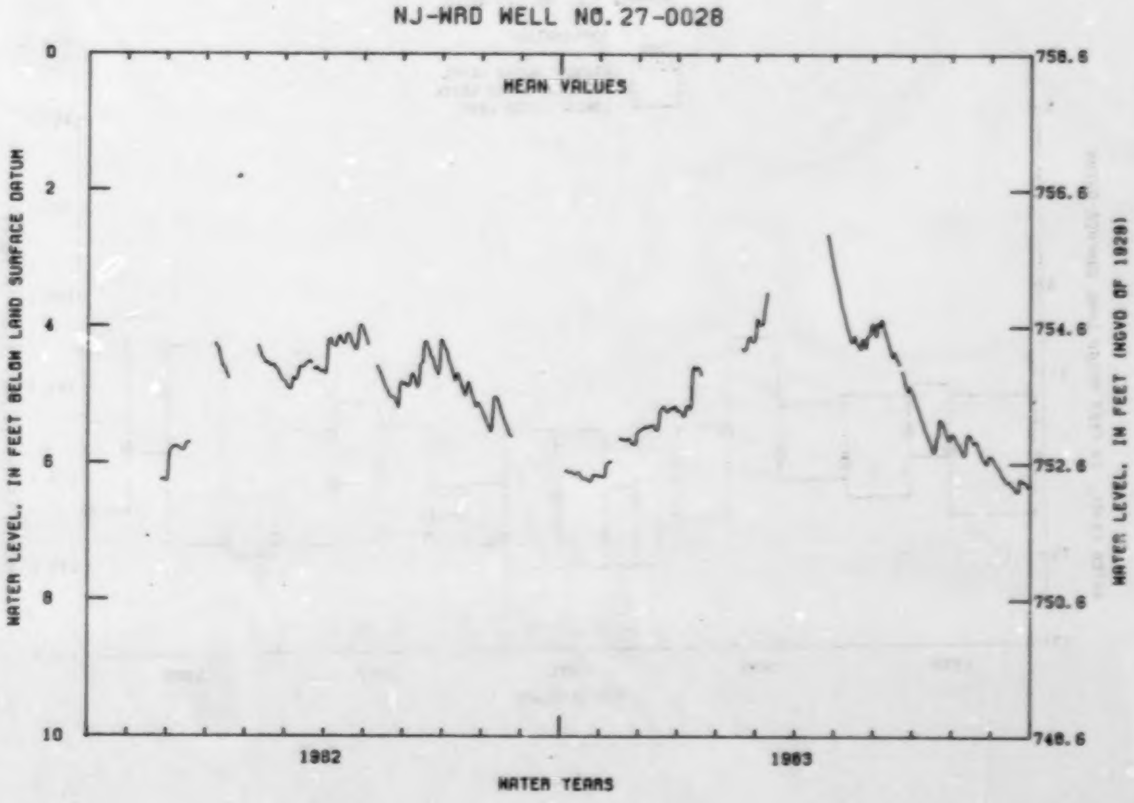
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 2.62 ft below land-surface datum, Apr. 26, 1983; lowest, 6.43 ft below land-surface datum, Sept. 20-21, 1983.

EXTREMES FOR CURRENT YEAR.--Highest water level, 2.62 ft below land-surface datum, Apr. 26; lowest, 6.43 ft below land-surface datum, Sept. 20-21.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	6.11	6.04	5.48	5.30	---	3.98	---	3.49	3.95	5.17	5.70	6.04
10	6.14	---	5.45	5.17	---	3.50	---	3.91	4.08	5.45	5.89	6.20
15	6.13	---	5.52	4.59	---	---	---	4.23	4.42	5.69	5.60	6.29
20	6.22	5.66	5.16	---	4.35	---	---	4.26	4.51	5.61	5.69	6.41
25	6.24	5.72	5.19	---	4.15	---	---	4.27	4.79	5.43	5.94	6.26
EOM	6.19	5.54	5.23	---	4.21	---	3.05	3.95	4.93	5.57	5.90	6.31
MEAN	6.18	5.82	5.34	---	---	---	---	3.97	4.38	5.47	5.76	6.22

WTR YR 1983 MEAN 5.20 HIGH 2.65 APR 26 LOW 6.41 SEP 20 AND OTHERS



OCEAN COUNTY

394829074053503. Local I.D., Island Beach 3 Obs. NJ-WRD Well Number, 29-0019.

LOCATION.--Lat 39°48'29", long 74°05'35", Hydrologic Unit 02040301, in Island Beach State Park, about 6.6 mi south of main entrance, Berkeley Township.

Owner: U.S. Geological Survey.

AQUIFER.--Potomac-Raritan-Magothy aquifer system, undifferentiated, of Cretaceous age.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 8 in, depth 2,756 ft, screened 2,736 to 2,756 ft.

INSTRUMENTATION.--Water-level extremes recorder, February 1977 to current year. Water-level recorder, November 1968 to March 1975.

DATUM.--Land-surface datum is 9.02 ft above National Geodetic Vertical Datum of 1929.

Measuring point: Front edge of cutout in recorder housing, 5.11 ft above land-surface datum.

REMARKS.--Water level affected by tidal fluctuation.

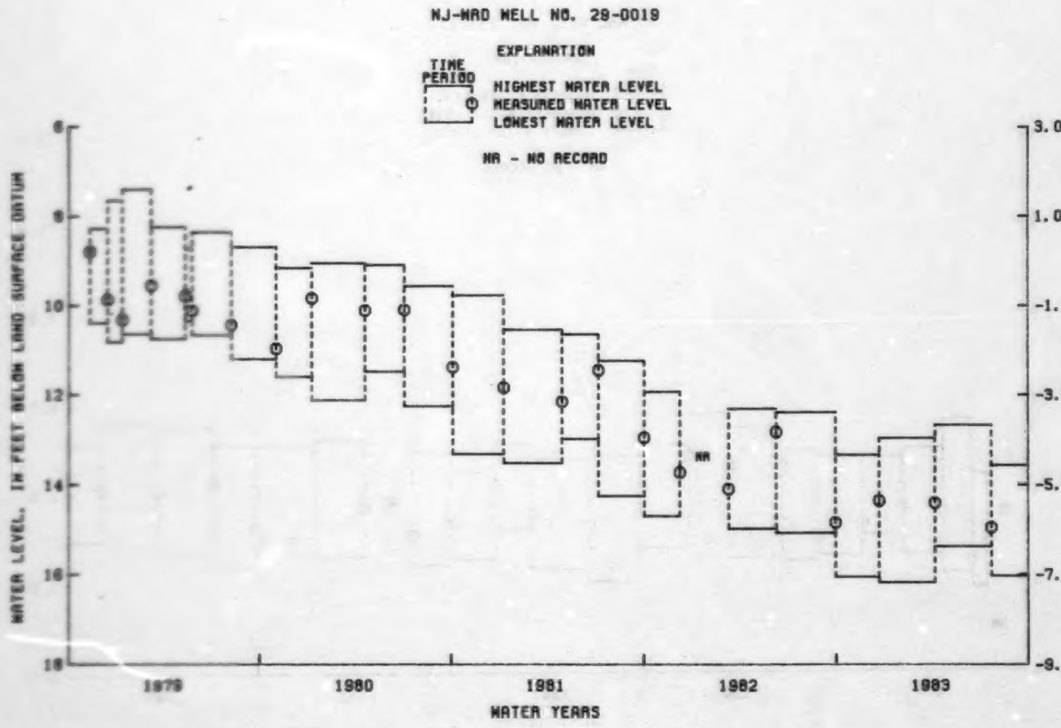
PERIOD OF RECORD.--November 1968 to March 1975, February 1977 to current year. Records for 1968 to 1975 are unpublished and are available in files of New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 5.95 ft above land-surface datum, Apr. 23, 1969; lowest, 16.17 ft below land-surface datum, between Dec. 21, 1982 and Apr. 5, 1983.

EXTREMES FOR CURRENT YEAR.--Highest water level, 12.66 ft below land-surface datum, between Apr. 5 and July 21; lowest, 16.17 ft below land-surface datum, between Dec. 21 and Apr. 5.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

WATER-LEVEL EXTREMES			MEASURED WATER LEVEL	
PERIOD	HIGHEST WATER LEVEL	LOWEST WATER LEVEL	DATE	WATER LEVEL
SEPT. 29, 1982 TO DEC. 21, 1982	13.33	16.05	DEC. 21, 1982	14.35
DEC. 21, 1982 TO APR. 5, 1983	12.95	16.17	APR. 5, 1983	14.40
APR. 5, 1983 TO JULY 21, 1983	12.66	15.37	JULY 21, 1983	14.95
JULY 21, 1983 TO OCT. 2, 1983	13.56	16.03	OCT. 2, 1983	15.45

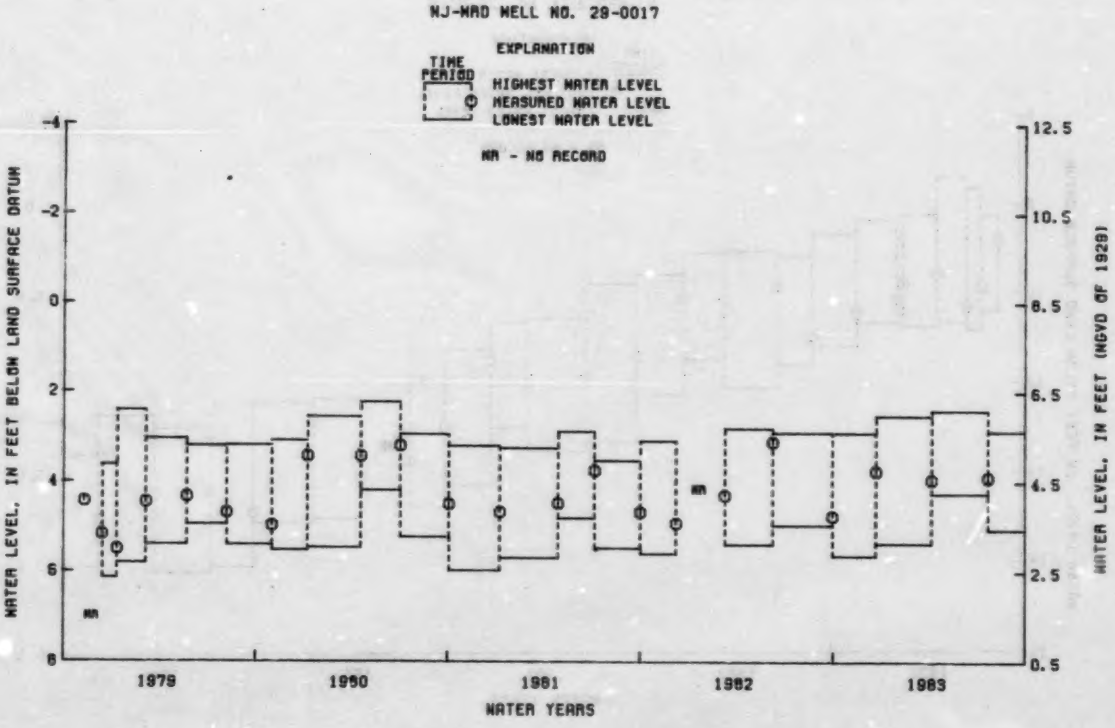


OCEAN COUNTY

394829074053501. Local I.D., Island Beach 1 Obs. NJ-WRD Well Number, 29-0017.
LOCATION.--Lat 39°48'29", long 74°05'35", Hydrologic Unit 02040301, in Island Beach State Park, about 6.6 mi south of main entrance, Berkeley Township.
Owner: U.S. Geological Survey.
AQUIFER.--Kirkwood-Cohansey aquifer system of Miocene age.
WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 6 in, depth 397 ft, screened 377 to 397 ft.
INSTRUMENTATION.--Water-level extremes recorder, February 1977 to current year. Water-level recorder, July 1962 to March 1975.
DATUM.--Land-surface datum is 8.50 ft above National Geodetic Vertical Datum of 1929.
Measuring point: Front edge of cutout in recorder housing, 3.40 ft above land-surface datum.
REMARKS.--Water level affected by tidal fluctuation.
PERIOD OF RECORD.--July 1962 to March 1975, February 1977 to current year. Records for 1962 to 1975 are unpublished and are available in files of New Jersey District Office.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 0.05 ft below land-surface datum, Dec. 6, 1962; lowest, 6.14 ft below land-surface datum, between Dec. 13, 1978 and Jan. 10, 1979.
EXTREMES FOR CURRENT YEAR.--Highest water level, 2.40 ft below land-surface datum, between Apr. 5 and July 21; lowest, 5.64 ft below land-surface datum, between Sept. 29 and Dec. 21, 1982.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

WATER-LEVEL EXTREMES			MEASURED WATER LEVEL	
PERIOD	HIGHEST WATER LEVEL	LOWEST WATER LEVEL	DATE	WATER LEVEL
SEPT. 29, 1982 TO DEC. 21, 1982	2.90	5.64	DEC. 21, 1982	3.75
DEC. 21, 1982 TO APR. 5, 1983	2.52	5.36	APR. 5, 1983	3.94
APR. 5, 1983 TO JULY 21, 1983	2.40	4.25	JULY 21, 1983	3.89
JULY 21, 1983 TO OCT. 2, 1983	2.86	5.05	OCT. 2, 1983	4.56



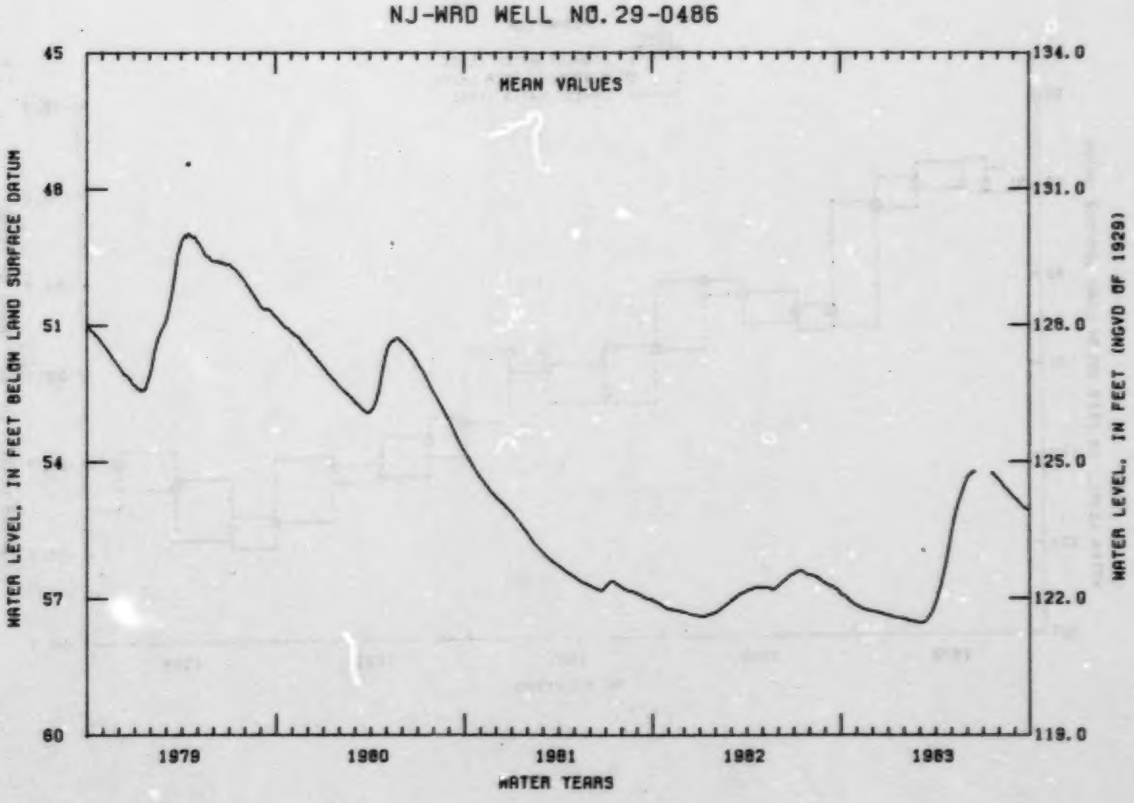
OCEAN COUNTY

395714074223401. Local I.D., Crammer Obs. NJ-WRD Well Number, 29-0486.
LOCATION.--Lat 39°57'14", long 74°22'34", Hydrologic Unit 02040301, about 800 ft east of Central Railroad of New Jersey, Whiting.
Owner: Whiting Bible Church.
AQUIFER.--Kirkwood-Cohansey aquifer system of Miocene age.
WELL CHARACTERISTICS.--Water-table observation well, diameter 8 in, depth 69 ft, slotted steel casing, gravel packed.
INSTRUMENTATION.--Water-level recorder.
DATUM.--Land-surface datum is 179.05 ft, revised, above National Geodetic Vertical Datum of 1929.
Measuring point: Top of 8-inch coupling, 0.90 ft above land-surface datum.
REMARKS.--Originally a dug well in which casing was inserted on March 31, 1966, and the well deepened from 60 to 69 ft. Water-quality records for 1983 are published elsewhere in this report.
PERIOD OF RECORD.--May 1952 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 47.80 ft below land-surface datum, June 9-14, 20-29, 1973; lowest, 57.58 ft below land surface datum, June 1, 1966; well was dry, November 1957 to February 1958, and December 1965, before deepening.
EXTREMES FOR CURRENT YEAR.--Highest water level, 54.22 ft below land-surface datum, June 14-17; lowest, 57.54 ft below land-surface datum, Mar. 3-4.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	56.93	57.18	57.29	57.39	57.47	57.53	57.02	55.45	54.32	---	54.43	54.83
10	56.96	57.22	57.31	57.40	57.49	57.53	56.82	55.18	54.27	---	54.52	54.89
15	57.00	57.24	57.32	57.42	57.50	57.50	56.61	54.95	54.22	---	54.58	54.96
20	57.06	57.26	57.33	57.44	57.51	57.43	56.35	54.79	---	---	54.62	55.01
25	57.11	57.27	57.35	57.44	57.53	57.34	56.07	54.63	---	54.30	54.71	55.05
EOM	57.15	57.28	57.37	57.45	57.53	57.19	55.78	54.44	---	54.37	54.78	55.08
MEAN	57.02	57.23	57.32	57.42	57.50	57.44	56.54	54.98	---	---	54.58	54.95

WTR YR 1983 MEAN 56.31 HIGH 54.22 JUN 14 AND OTHERS LOW 57.54 MAR 3 AND OTHERS



OCEAN COUNTY

395609074124001. Local I.D., Toms River TW 2 Obs. NJ-WRD Well Number, 29-0534.

LOCATION.--Lat 39°56'09", long 74°12'40", Hydrologic Unit 02040301, about 200 ft east of Double Trouble Road on the north side of Jakes Branch, South Toms River.

Owner: U.S. Geological Survey.

AQUIFER.--Englishtown aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 8 in, depth 1,146 ft, screened 1,080 to 1,146 ft.

INSTRUMENTATION.--Water-level extremes recorder, February 1977 to current year. Water-level recorder, December 1965 to March 1975.

DATUM.--Land-surface datum is 18.34 ft above National Geodetic Vertical Datum of 1929.

Measuring point: Front edge of cutout in recorder housing, 1.70 ft above land-surface datum.

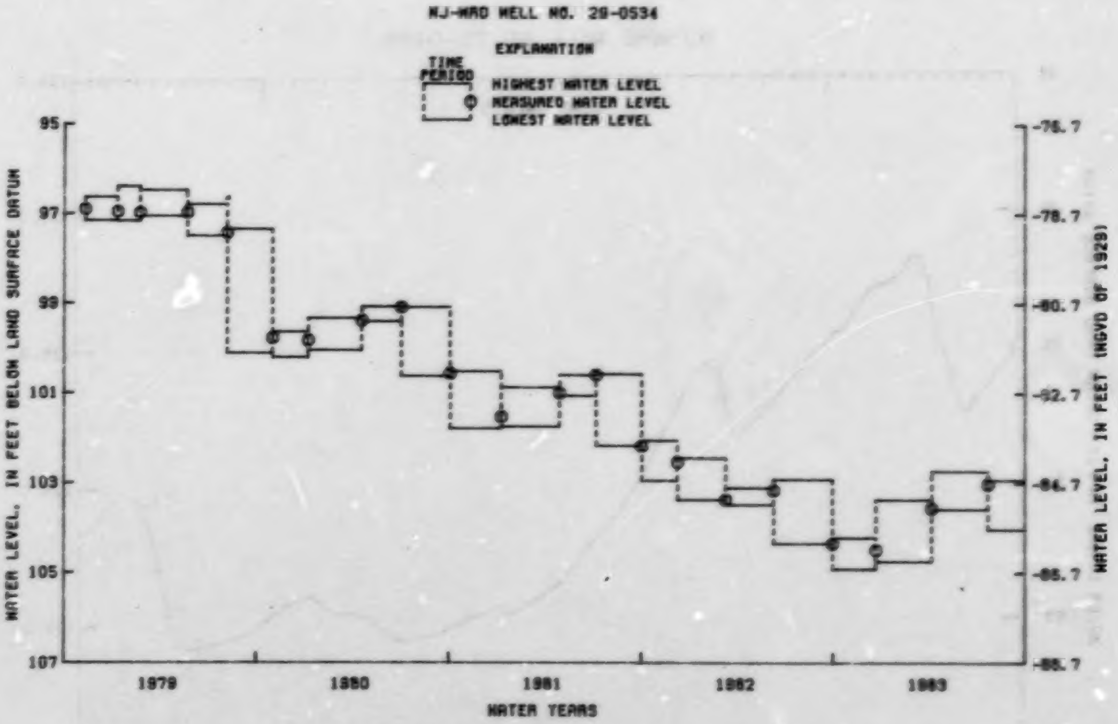
PERIOD OF RECORD.--December 1965 to March 1975, February 1977 to current year. Records for 1965 to 1975 are unpublished and are available in files of New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 48.37 ft below land-surface datum, May 28, 1966; lowest, 104.91 ft below land-surface datum, between Sept. 29 and Dec. 21, 1982.

EXTREMES FOR CURRENT YEAR.--Highest water level, 102.73 ft below land-surface datum, between Apr. 5 and July 21; lowest, 104.91 ft below land-surface datum, between Sept. 29 and Dec. 21, 1982.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

WATER-LEVEL EXTREMES			MEASURED WATER LEVEL	
PERIOD	HIGHEST WATER LEVEL	LOWEST WATER LEVEL	DATE	WATER LEVEL
SEPT. 29, 1982 TO DEC. 21, 1982	104.21	104.91	DEC. 21, 1982	104.48
DEC. 21, 1982 TO APR. 5, 1983	103.36	104.74	APR. 5, 1983	103.55
APR. 5, 1983 TO JULY 21, 1983	102.73	103.58	JULY 21, 1983	103.02
JULY 21, 1983 TO OCT. 2, 1983	102.93	104.03	OCT. 2, 1983	103.88



OCEAN COUNTY

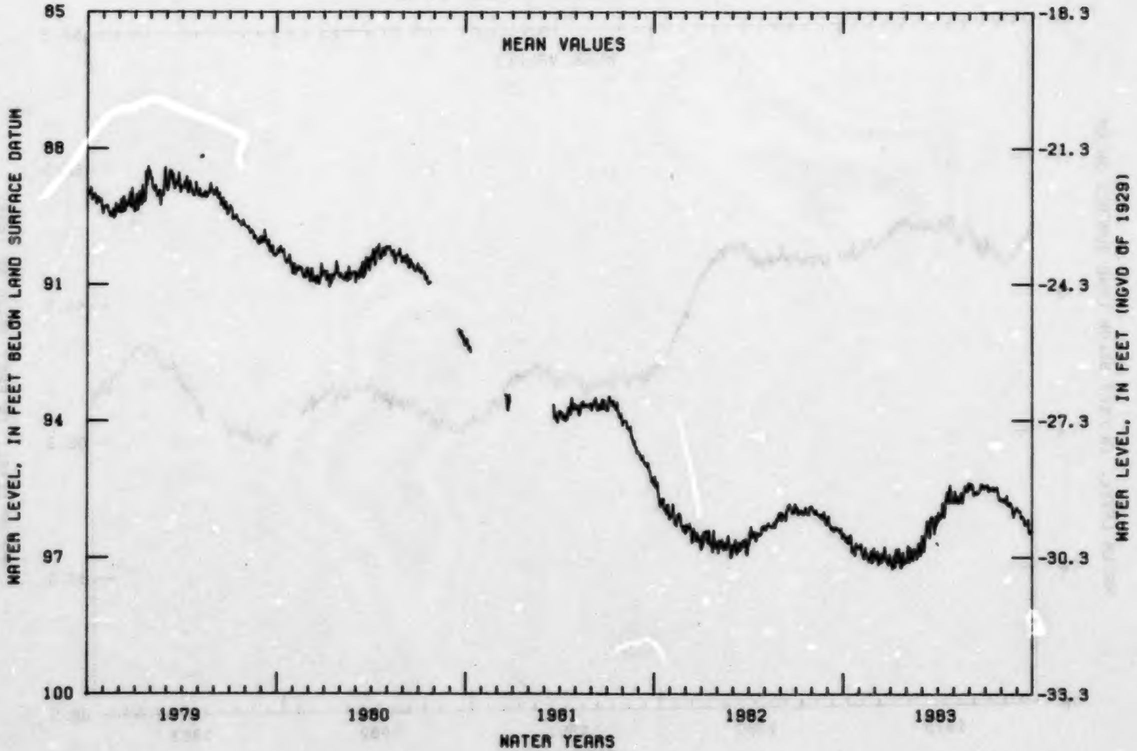
395930074142101. Local I.D., Toms River Chem 84 Obs. NJ-WRD Well Number, 29-0085.
LOCATION.--Lat 39°59'29", long 74°14'20", Hydrologic Unit 02040301, at Toms River Plant, Ciba-Geigy Corporation, Dover Township.
Owner: Ciba-Geigy Corporation.
AQUIFER.--Potomac-Raritan-Magothy aquifer system, undifferentiated, of Cretaceous age.
WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 8 in, depth 1,480 ft, screened 1,460 to 1,480 ft.
INSTRUMENTATION.--Water-level recorder.
DATUM.--Land-surface datum is 66.71 ft above National Geodetic Vertical Datum of 1929.
Measuring point: Top edge of recorder shelf, 2.70 ft above land-surface datum.
PERIOD OF RECORD.--July 1968 to July 1975, March 1977 to current year. Records for 1968 to 1975 are unpublished and are available in files of New Jersey District Office.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 62.32 ft below land-surface datum, July 19, 1968 and Feb. 9, 1969; lowest, 97.30 ft below land-surface datum, Jan. 4, 1983.
EXTREMES FOR CURRENT YEAR.--Highest water level, 95.33 ft below land-surface datum, June 24; lowest, 97.30 ft below land-surface datum, Jan. 4.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	96.61	96.71	96.91	97.18	97.08	96.85	96.15	95.63	95.43	95.40	95.78	95.99
10	96.68	97.03	97.10	97.12	97.04	96.40	95.95	95.79	95.63	95.47	95.82	96.11
15	96.51	96.88	97.09	96.87	96.81	96.38	96.01	95.62	95.55	95.48	95.86	96.25
20	96.85	97.09	96.77	97.22	97.03	96.21	95.56	95.67	95.56	95.54	95.81	96.29
25	96.81	97.12	97.09	96.99	96.71	96.31	95.41	95.50	95.38	95.52	96.12	96.48
EOM	96.81	96.93	97.14	97.02	96.90	96.22	95.80	95.36	95.49	95.71	95.90	96.42
MEAN	96.70	96.93	97.01	97.05	96.91	96.41	95.87	95.63	95.50	95.52	95.85	96.20

WTR YR 1983 MEAN 96.29 HIGH 95.36 MAY 31 LOW 97.25 JAN 4

NJ-WRD WELL NO. 29-0085



OCEAN COUNTY

400416074270101. Local I.D., Colliers Mills TW 1 Obs. NJ-WRD Well Number, 29-0138.

LOCATION.--Lat 40°04'14", long 74°27'02", Hydrologic Unit 02040301, along western shore of Colliers Mills Pond, Jackson Township.

Owner: U.S. Geological Survey.

AQUIFER.--Englishtown aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 6 in, depth 427 ft, screened 417 to 427 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Land-surface datum is 136.52 ft above National Geodetic Vertical Datum of 1929.

Measuring point: Top of 6 inch coupling, 2.20 ft above land-surface datum.

REMARKS.--Water-quality records for 1983 are published elsewhere in this report.

PERIOD OF RECORD.--February 1964 to July 1975, March 1977 to current year. Records for 1964 to 1975 are unpublished and are available in files of New Jersey District Office.

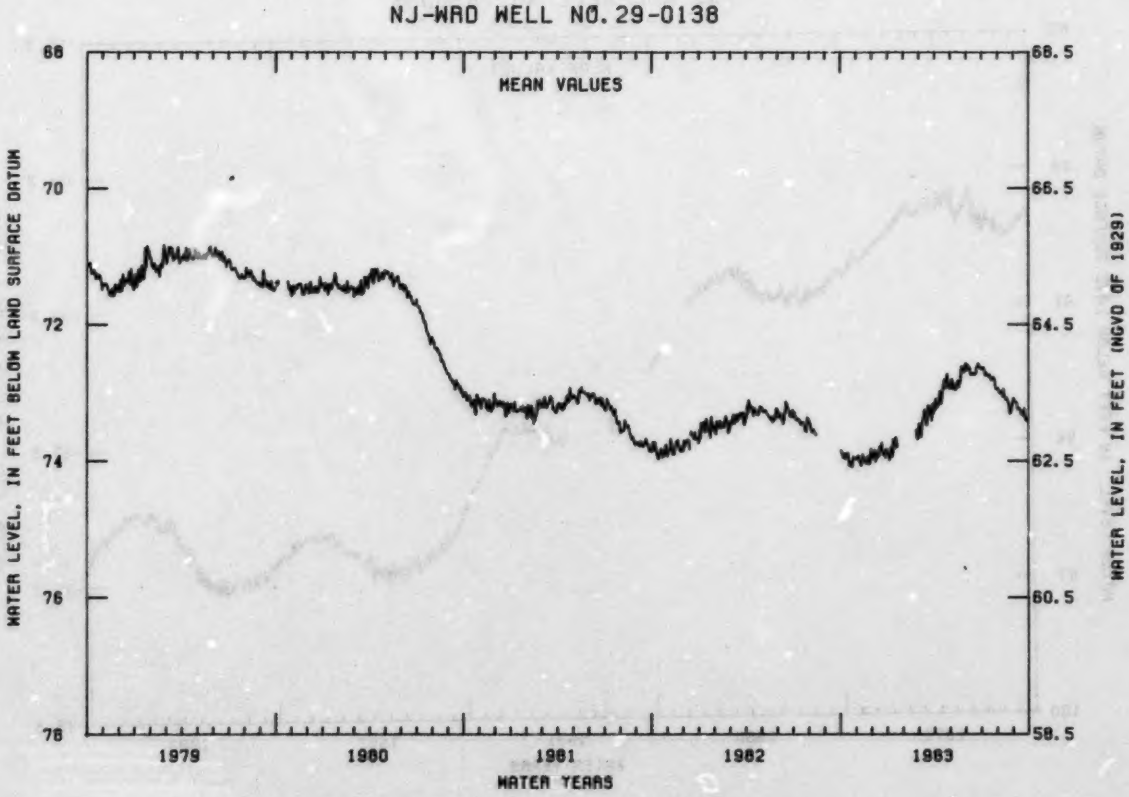
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 52.02 ft below land-surface datum, Feb. 19, 1964; lowest, 74.10 ft below land-surface datum, Oct. 24, 1982.

EXTREMES FOR CURRENT YEAR.--Highest water level, 72.55 ft below land-surface datum, June 24; lowest, 74.10 ft below land-surface datum, Oct. 24.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	73.92	73.93	73.87	73.93	---	73.65	73.20	72.86	72.63	72.63	73.01	73.14
10	73.96	74.07	73.96	73.88	---	73.37	73.05	72.95	72.74	72.71	73.06	73.23
15	73.88	73.94	73.91	73.68	---	73.37	73.09	72.86	72.71	72.75	73.07	73.30
20	74.04	74.04	73.73	---	---	73.26	72.81	72.86	72.71	72.80	73.10	73.34
25	73.99	74.05	73.90	---	73.55	73.33	72.72	72.69	72.58	72.81	73.31	73.41
EOM	73.97	73.91	73.92	---	73.65	73.26	72.94	72.57	72.66	72.94	73.08	73.36
MEAN	73.96	73.98	73.89	---	---	73.37	73.01	72.81	72.67	72.77	73.09	73.27

WTR YR 1983 MEAN 73.32 HIGH 72.57 MAY 31 AND OTHERS LOW 74.09 OCT 24

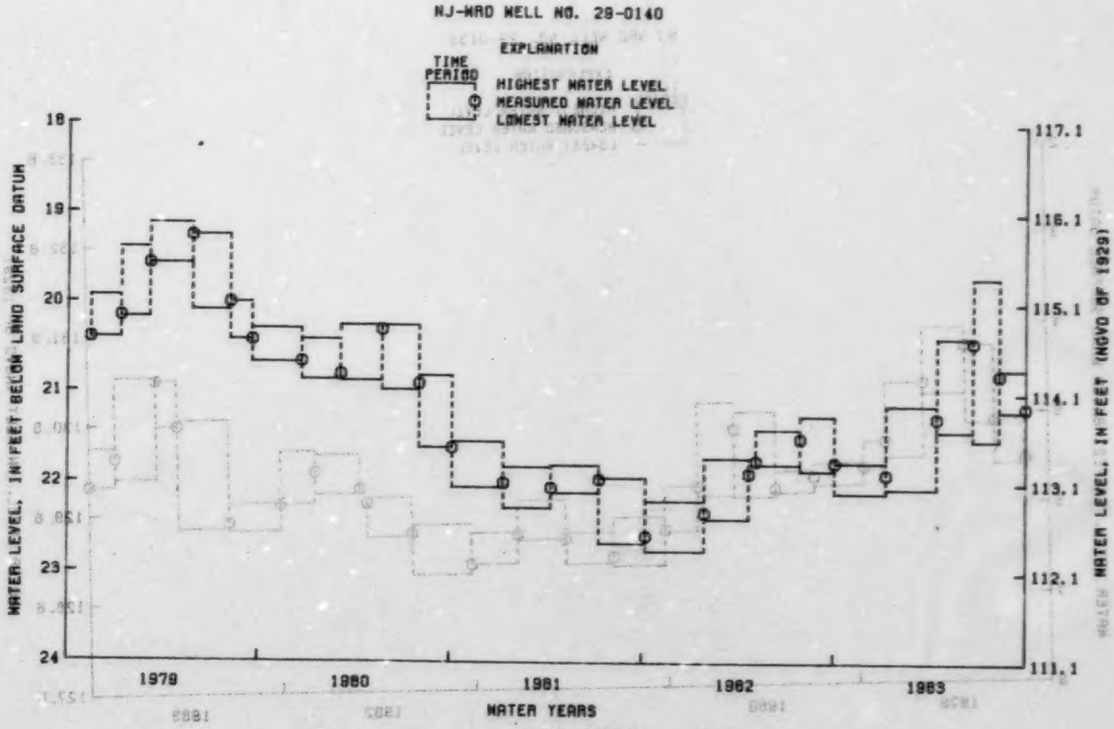


OCEAN COUNTY

400416074270103. Local I.D., Colliers Mills TW 3 Obs. NJ-WRD Well Number, 29-0140.
LOCATION.--Lat 40°04'14", long 74°27'02", Hydrologic Unit 02040301, along western shore of Colliers Mills Pond, Jackson Township.
Owner: U.S. Geological Survey.
AQUIFER.--Wenonah-Mount Laurel aquifer of Cretaceous age.
WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 6 in, depth 270 ft, screened 257 to 267 ft.
INSTRUMENTATION.--Water-level extremes recorder, October 1976 to current year. Water-level recorder, January 1964 to July 1975.
DATUM.--Land-surface datum is 135.15 ft above National Geodetic Vertical Datum of 1929.
Measuring point: Front edge of cutout in recorder housing, 3.49 ft above land-surface datum.
REMARKS.--Water-quality records for 1983 are published elsewhere in this report.
PERIOD OF RECORD.--January 1964 to July 1975, October 1976 to current year. Records for 1964 to 1975 are unpublished and are available in files of New Jersey District Office.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 15.72 ft below land-surface datum, May 9, 1964; lowest, 22.76 ft below land-surface datum, between Oct. 6, 1981 and Jan. 26, 1982.
EXTREMES FOR CURRENT YEAR.--Highest water level, 19.71 ft below land-surface datum, between June 21 and Aug. 10; lowest, 22.11 ft below land-surface datum, between Oct. 1 and Jan. 7.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

WATER-LEVEL EXTREMES			MEASURED WATER LEVEL	
PERIOD	HIGHEST WATER LEVEL	LOWEST WATER LEVEL	DATE	WATER LEVEL
OCT. 1, 1982 TO JAN. 7, 1983	21.77	22.11	JAN. 7, 1983	21.90
JAN. 7, 1983 TO APR. 13, 1983	21.13	22.06	APR. 13, 1983	21.27
APR. 13, 1983 TO JUNE 21, 1983	20.38	21.42	JUNE 21, 1983	20.43
JUNE 21, 1983 TO AUG. 10, 1983	19.71	21.52	AUG. 10, 1983	20.79
AUG. 10, 1983 TO SEPT. 29, 1983	20.73	21.19	SEPT. 29, 1983	21.15



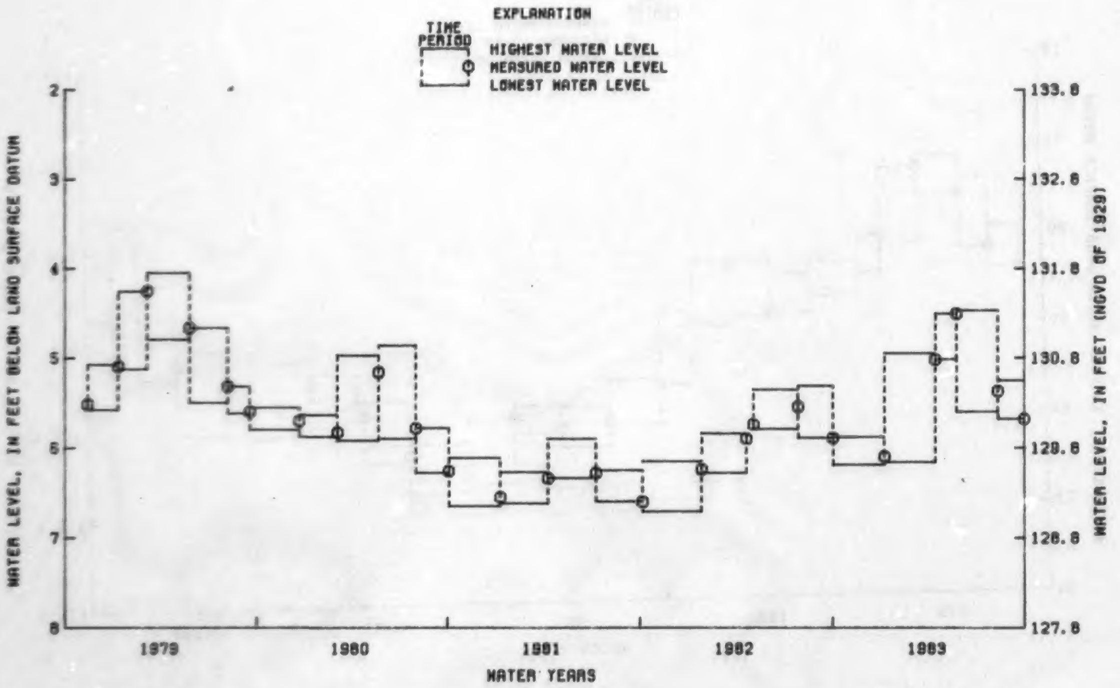
OCEAN COUNTY

400416074270102. Local I.D., Colliers Mills TW 2 Obs. NJ-WRD Well Number, 29-0139.
LOCATION.--Lat 40°04'14", long 74°27'02", Hydrologic Unit 02040301, along western shore of Colliers Mills Pond, Jackson Township.
Owner: U.S. Geological Survey.
AQUIFER.--Vincentown Formation of Paleocene age.
WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 6 in, depth 171 ft, screened 161 to 171 ft.
INSTRUMENTATION.--Water-level extremes recorder, October 1976 to current year. Water-level recorder, January 1964 to August 1975.
DATUM.--Land-surface datum is 135.76 ft above National Geodetic Vertical Datum of 1929.
Measuring point: Front edge of cutout in recorder housing, 3.10 ft above land-surface datum.
REMARKS.--Water-quality records for 1983 are published elsewhere in this report.
PERIOD OF RECORD.--January 1964 to August 1975, October 1976 to current year. Records for 1964 to 1981 are unpublished and are available in files of New Jersey District Office.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 4.04 ft below land-surface datum, Apr. 27-28, 1973; lowest, 6.71 ft below land-surface datum, between Oct. 6, 1981 and Jan. 26, 1982.
EXTREMES FOR CURRENT YEAR.--Highest water level, 4.47 ft below land-surface datum, between May 23 and Aug. 10; lowest, 6.19 ft below land-surface datum, between Oct. 1 and Jan. 7.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

WATER-LEVEL EXTREMES			MEASURED WATER LEVEL	
PERIOD	HIGHEST WATER LEVEL	LOWEST WATER LEVEL	DATE	WATER LEVEL
OCT. 1, 1982 TO JAN. 7, 1983	5.88	6.19	JAN. 7, 1983	6.10
JAN. 7, 1983 TO APR. 13, 1983	4.95	6.16	APR. 13, 1983	5.02
APR. 13, 1983 TO MAY 23, 1983	4.51	5.02	MAY 23, 1983	4.51
MAY 23, 1983 TO AUG. 10, 1983	4.47	5.60	AUG. 10, 1983	5.37
AUG. 10, 1983 TO SEPT. 29, 1983	5.25	5.68	SEPT. 29, 1983	5.68

NJ-WRD WELL NO. 29-0139



OCEAN COUNTY

400416074270104. Local I.D., Colliers Mills TW 4 Obs. NJ-WRD Well Number, 29-0141.

LOCATION.--Lat 40°04'14", long 74°27'02", Hydrologic Unit 02040301, along western shore of Colliers Mills Pond, Jackson Township.

Owner: U.S. Geological Survey.

AQUIFER.--Kirkwood-Cohansey aquifer system of Miocene age.

WELL CHARACTERISTICS.--Drilled water-table observation well, diameter 6 in, depth 71 ft, gravel-filled hole 46 to 71 ft.

INSTRUMENTATION.--Water-level extremes recorder, October 1976 to current year. Water-level recorder, March 1964 to April 1975.

DATUM.--Land-surface datum is 135.31 ft above National Geodetic Vertical Datum of 1929.

Measuring point: Front edge of cutout in recorder housing, 2.86 ft above land-surface datum.

REMARKS.--Water level affected by stage of Colliers Mills Pond.

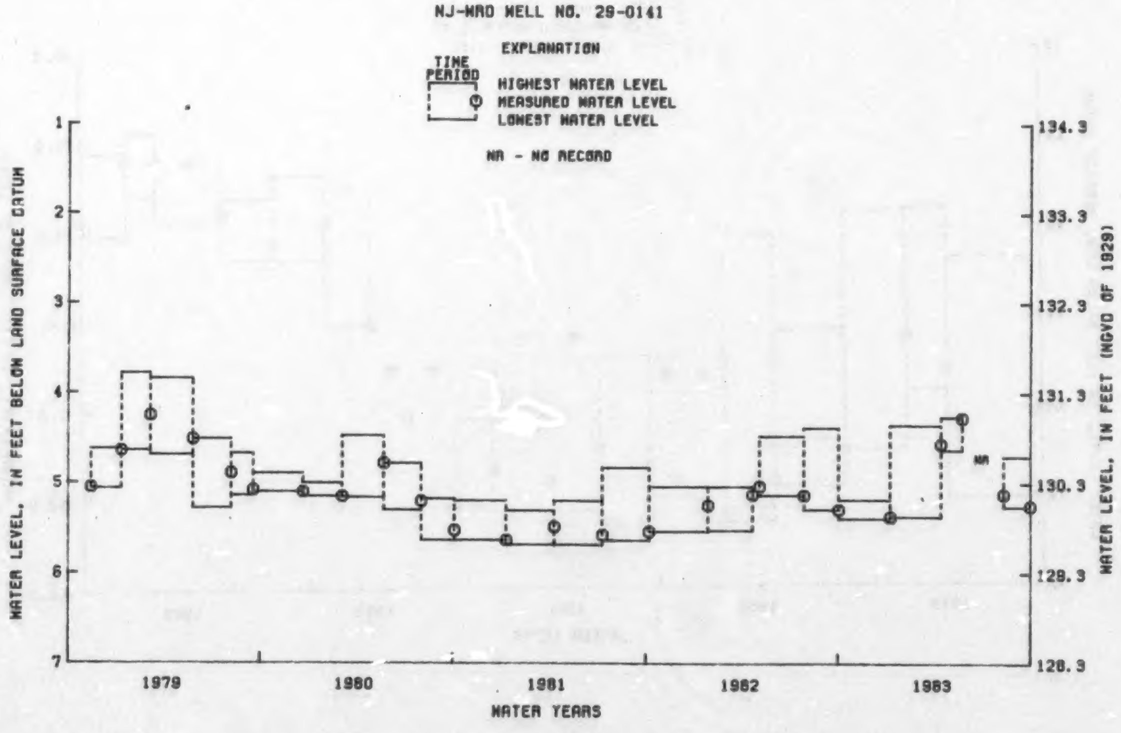
PERIOD OF RECORD.--March 1964 to April 1975, October 1976 to current year. Records for 1964 to 1981 are unpublished and are available in files of New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 3.78 ft below land-surface datum, between Jan. 10 and Mar. 5, 1979; lowest, 5.68 ft below land-surface datum, between Jan. 9 and Apr. 9, 1981 and between Apr. 9 and July 9, 1981.

EXTREMES FOR CURRENT YEAR.--Highest water level, 4.26 ft below land-surface datum, between Apr. 13 and May 23; lowest, 5.39 ft below land-surface datum, between Oct. 1 and Jan. 7.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

WATER-LEVEL EXTREMES			MEASURED WATER LEVEL	
PERIOD	HIGHEST WATER LEVEL	LOWEST WATER LEVEL	DATE	WATER LEVEL
OCT. 1, 1982 TO JAN. 7, 1983	5.18	5.39	JAN. 7, 1983	5.37
JAN. 7, 1983 TO APR. 13, 1983	4.35	5.37	APR. 13, 1983	4.56
APR. 13, 1983 TO MAY 23, 1983	4.26	4.63	MAY 23, 1983	4.27
MAY 23, 1983 TO AUG. 10, 1983	---	---	AUG. 10, 1983	5.12
AUG. 10, 1983 TO SEPT. 29, 1983	4.70	5.26	SEPT. 29, 1983	5.25



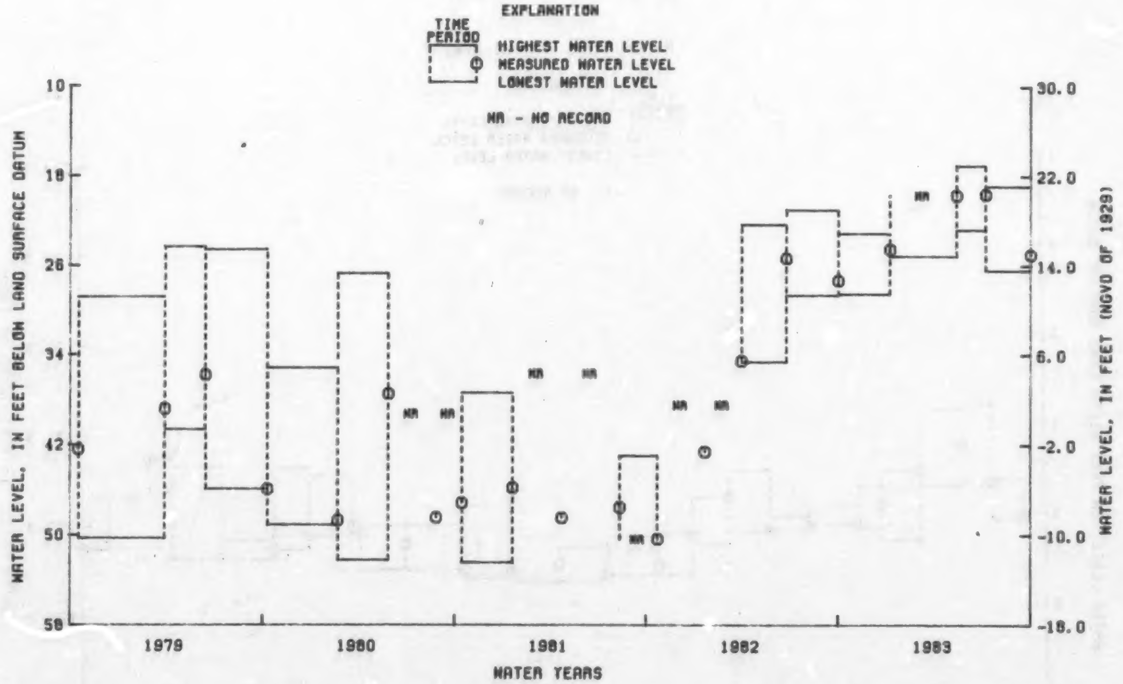
UNION COUNTY

403726074162401. Local I.D., Hatfield 2 Obs. NJ-WRD Well Number, 39-0133.
LOCATION.--Lat 40°37'26", long 74°16'23", Hydrologic Unit 02030104, at the Hatfield Wire and Cable Company plant, near the intersection of North Stiles Street and Fuller Road, Linden.
Owner: Hatfield Wire and Cable Company.
AQUIFER.--Brunswick Formation of Triassic age.
WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 6 in, cased to 32 ft, depth 223 ft, open hole.
INSTRUMENTATION.--Water-level extremes recorder, April 1977 to current year. Water-level recorder, January 1967 to August 1975.
DATUM.--Land-surface datum is 40.00 ft above National Geodetic Vertical Datum of 1929.
Measuring point: Front edge of cutout in recorder housing, 1.47 ft above land-surface datum.
REMARKS.--Water level affected by nearby pumping.
PERIOD OF RECORD.--January 1967 to August 1975, April 1977 to current year. Records for 1967 to 1982 are unpublished and are available in files of New Jersey District Office.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 17.04 ft below land-surface datum, between May 12 and July 6, 1983; lowest, 52.44 ft below land-surface datum, between Oct. 14, 1980 and Jan. 19, 1981.
EXTREMES FOR CURRENT YEAR.--Highest water level, 17.04 ft below land-surface datum, between May 12 and July 6; lowest, 28.55 ft below land-surface datum, between Sept. 30, 1982 and Jan. 6, 1983.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

WATER-LEVEL EXTREMES			MEASURED WATER LEVEL	
PERIOD	HIGHEST WATER LEVEL	LOWEST WATER LEVEL	DATE	WATER LEVEL
SEPT. 30, 1982 TO JAN. 6, 1983	23.11	28.55	JAN. 6, 1983	24.52
JAN. 6, 1983 TO MAY 12, 1983	---	25.14	MAY 12, 1983	19.70
MAY 12, 1983 TO JULY 6, 1983	17.04	22.80	JULY 6, 1983	19.63
JULY 6, 1983 TO SEPT. 30, 1983	18.89	26.43	SEPT. 30, 1983	25.00

NJ-WRD WELL NO. 39-0133



UNION COUNTY

404027074164401. Local I.D., White Lab. 3 Obs. NJ-WRD Well Number, 39-0102.

LOCATION.--Lat 40°40'27", long 74°16'44", Hydrologic Unit 02030104, at north end of South 31st Street, Kenilworth. Owner: Schering Corporation.

AQUIFER.--Brunswick Formation of Triassic age.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 8 in, cased to 49 ft, depth 251 ft, open hole.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Land-surface datum is 85.22 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top edge of recorder shelf at land-surface datum.

REMARKS.--Land-surface datum prior to February 1974, 4.20 ft lower. Water level affected by nearby pumping.

PERIOD OF RECORD.--September 1952 to current year. Records for March to August 1952, published in WSP 1265, are unreliable and should not be used.

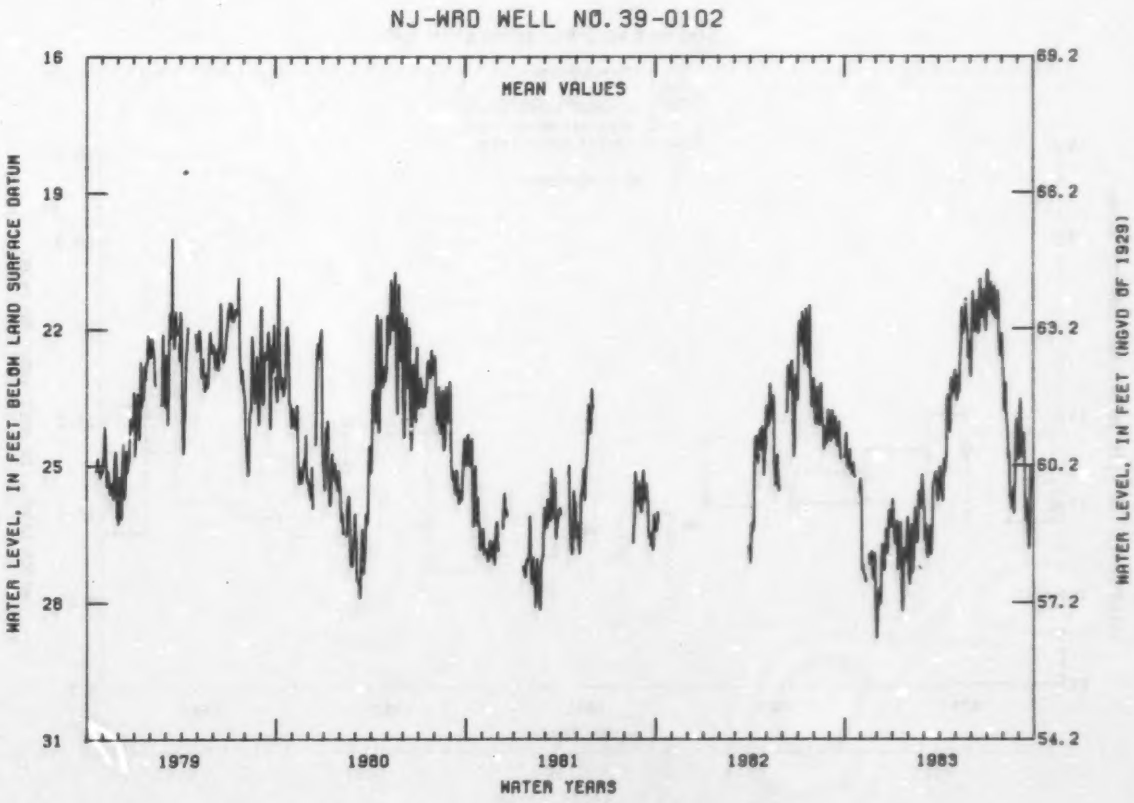
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 10.51 ft below land-surface datum, Apr. 17, 1961; lowest, 30.70 ft below land-surface datum, Oct. 7, 1977.

EXTREMES FOR CURRENT YEAR.--Highest water level, 20.58 ft below land-surface datum, July 5; lowest, 28.89 ft below land-surface datum, Dec. 2.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	24.69	27.18	27.90	26.45	27.18	26.63	25.45	23.31	21.51	20.74	23.79	23.54
10	24.78	27.54	27.90	26.22	27.23	26.95	25.01	23.41	22.06	21.03	24.04	24.76
15	25.18	---	26.85	26.72	26.14	26.67	24.90	21.62	21.94	21.68	24.86	25.86
20	25.21	27.06	26.39	27.99	26.19	25.88	23.70	22.00	20.91	21.78	25.93	26.40
25	---	27.49	26.22	26.97	25.94	25.22	23.08	21.88	21.72	21.39	25.62	25.31
EOM	25.36	27.93	26.04	26.12	25.20	25.68	23.44	22.44	21.92	22.13	24.64	25.55
MEAN	24.96	27.04	27.11	26.75	26.42	26.07	24.47	22.46	21.78	21.58	24.53	25.24

WTR YR 1983 MEAN 24.82 HIGH 20.70 JUL 4 LOW 28.78 DEC 2



UNION COUNTY

404111074121701. Local I.D., Schweitzer Obs. NJ-WRD Well Number, 39-0058.

LOCATION.--Lat 40°41'13", long 74°12'16", Hydrologic Unit 02030104, on the east side of Newark Avenue, about 0.5 mi north of the intersection with North Avenue, Elizabeth.

Owner: Magruder Color Company.

AQUIFER.--Brunswick Formation of Triassic age.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 10 in, length of casing unknown, depth 660 ft, open hole.

INSTRUMENTATION.--Water-level extremes recorder, April 1977 to current year. Water-level recorder, April 1956 to July 1970.

DATUM.--Land-surface datum is 28.23 ft above National Geodetic Vertical Datum of 1929.

Measuring point: Front edge of cutout in recorder housing, 3.45 ft below land-surface datum.

REMARKS.--Water level affected by nearby pumping.

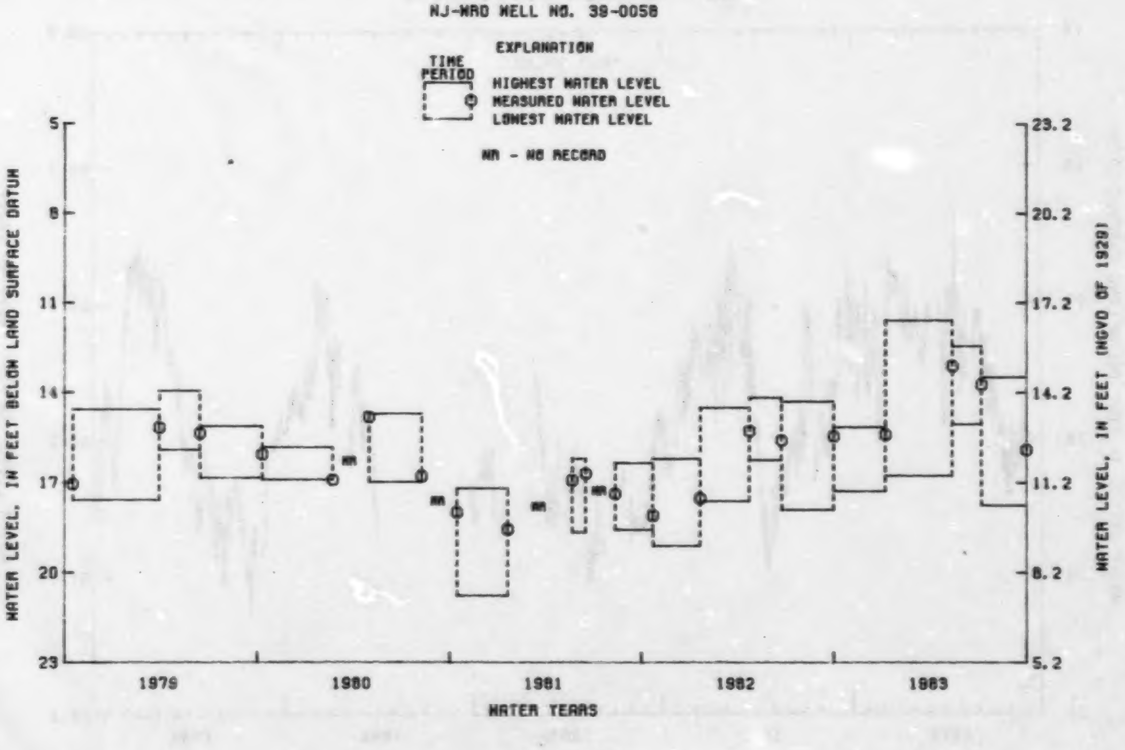
PERIOD OF RECORD.--April 1956 to July 1970, April 1977 to current year. Periodic manual measurements, December 1970 to March 1977. Records for 1956 to 1982 are unpublished and are available in files of New Jersey District Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 11.57 ft below land-surface datum, between Jan. 6 and May 12, 1983; lowest, 26.83 ft below land-surface datum, Oct. 31, 1963.

EXTREMES FOR CURRENT YEAR.--Highest water level, 11.57 ft below land-surface datum, between Jan. 6 and May 12; lowest, 17.75 ft below land-surface datum, between July 6 and Sept. 30.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

WATER-LEVEL EXTREMES			MEASURED WATER LEVEL	
PERIOD	HIGHEST WATER LEVEL	LOWEST WATER LEVEL	DATE	WATER LEVEL
SEPT. 30, 1982 TO JAN. 6, 1983	15.14	17.28	JAN. 6, 1983	15.39
JAN. 6, 1983 TO MAY 12, 1983	11.57	16.76	MAY 12, 1983	13.10
MAY 12, 1983 TO JULY 6, 1983	12.43	15.04	JULY 6, 1983	13.73
JULY 6, 1983 TO SEPT. 30, 1983	13.47	17.75	SEPT. 30, 1983	15.90



WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

ATLANTIC COUNTY

WELL NUMBER	LOCAL IDENTIFIER	LATITUDE	LONGITUDE	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD)	SCREENED INTERVAL (FT)	GEOLOGIC UNIT	DATE OF SAMPLE	TEMPERATURE (DEG C)	SPECIFIC CONDUCTANCE (UMHOS)	PH (UNITS)	CHLORIDE, DISSOLVED (MG/L AS CL)
39	BRIGANTINE CITY WD 4-66	39 23 29	074 23 27	10	733-783	122KRKDL	83-09-30	19.0	142	7.3	3.9
683	BRIGANTINE CITY WD 5-80	39 24 11	074 22 26	10	730-780	122KRKDL	83-09-30	17.5	155	7.3	5.5
565	ATLANTIC CITY MUA 14	39 24 46	074 30 38	5	610-660	122KRKDL	83-09-30	18.0	105	7.1	2.3
42	BRIGANTINE CITY WD 2-29	39 24 56	074 21 22	12	718-778	122KRKDL	83-09-30	--	90	7.3	2.4
574	ATLANTIC CITY MUA 7	39 25 12	074 30 31	7	160-211	121CKKD	83-09-30	13.5	223	4.9	57
5	ATLANTIC CITY MUA 9	39 25 14	074 30 52	5	180-210	121CKKD	83-09-30	13.0	62	5.2	7.0

Geologic unit (aquifer):

121CKKD - Kirkwood-Cohansey aquifer system
122KRKDL - Atlantic City 800-foot sand of the Kirkwood Formation

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

BURLINGTON COUNTY

WELL NUMBER	LOCAL IDENTIFIER	LATITUDE	LONGITUDE	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD)	SCREENED INTERVAL (FT)	GEOLOGIC UNIT	DATE OF SAMPLE	TEMPERATURE (DEG C)	SPECIFIC CONDUCTANCE (UMHOS)
482	MULLICA 43S	39 38 09	074 33 49	39.95	20- 25	121CKKD	83-09-28	17.5	80
511	MULLICA 6D	39 40 09	074 32 51	42.35	245-250	121CKKD	83-09-23	12.5	32
512	MULLICA 56S	39 40 09	074 32 52	42.27	45- 50	121CKKD	83-09-23	12.0	56
407	USGS-ATSION 1 OBS	39 44 22	074 43 09	46.76	240-260	124MNSQ	83-06-06	16.5	370
408	USGS-ATSION 2 OBS	39 44 22	074 43 09	47.52	63- 65	121CKKD	83-06-01	12.5	130
409	USGS-ATSION 3 OBS	39 44 22	074 43 09	47.13	14- 17	121CKKD	83-06-01	11.5	49
454	MULLICA 3D	39 48 12	074 40 31	66.62	137-142	121CKKD	83-09-28	12.5	51
455	MULLICA 53S	39 48 12	074 40 31	66.54	46- 51	121CKKD	83-09-28	13.5	39

LOCAL IDENTIFIER	PH (STANDARD UNITS)	HARDNESS (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY FIELD (MG/L AS CACO3)	BICARBONATE FET-FLD (MG/L AS HCO3)	CARBONATE FET-FLD (MG/L AS CO3)	CHLORIDE, DISSOLVED (MG/L AS CL)
MULLICA 43S	4.3	6	.98	.75	5.4	.40	<1	--	--	9.0
MULLICA 6D	--	2	.33	.31	2.0	1.7	--	--	--	3.0
MULLICA 56S	4.4	2	.33	.31	2.0	.40	<1	--	--	3.2
USGS-ATSION 1 OBS	8.4	26	8.0	1.5	75	4.6	--	200	2	1.4
USGS-ATSION 2 OBS	6.6	3	.53	.47	2.2	.40	--	89	--	3.1
USGS-ATSION 3 OBS	5.0	9	2.4	.80	2.5	.40	--	3	--	3.7
MULLICA 3D	6.4	10	3.3	.50	3.9	2.2	--	--	--	2.0
MULLICA 53S	4.8	6	.83	.96	2.3	.70	--	--	--	3.5

LOCAL IDENTIFIER	SULFATE DISSOLVED (MG/L AS SO4)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	ALKALINITY LAB (MG/L AS CACO3)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	NITROGEN DISSOLVED (MG/L AS N)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	PHOSPHORUS, DISSOLVED (MG/L AS PO4)
MULLICA 43S	14	.10	4.1	<1.0	34	--	.020	<.100	2.3	--
MULLICA 6D	5.6	<.10	15	5.0	31	--	.080	<.100	<.10	--
MULLICA 56S	13	<.10	15	<1.0	24	--	.060	<.100	<.10	--
USGS-ATSION 1 OBS	15	.40	11	179	229	--	<.010	<.100	.12	.88
USGS-ATSION 2 OBS	42	<.10	8.2	14	4	--	--	--	--	--
USGS-ATSION 3 OBS	13	<.10	5.0	2.0	51	--	<.010	10.0	.12	.15
MULLICA 3D	6.1	.10	35	16	52	--	<.010	<.100	.20	--
MULLICA 53S	4.5	<.10	6.4	5.0	22	.89	.010	.590	.30	--

LOCAL IDENTIFIER	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	BERYLLIUM, DISSOLVED (UG/L AS BE)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)
MULLICA 43S	1300	--	130	<1	<1	--	<3	<10	4	<10
MULLICA 6D	20	--	54	<1	<1	--	<3	<10	1200	<10
MULLICA 56S	1000	--	57	<0	<1	--	<3	<10	1200	<10
USGS-ATSION 1 OBS	10	1	--	--	<1	<1	--	1	93	1
USGS-ATSION 2 OBS	120	<1	--	--	2	<1	--	2	33000	17
USGS-ATSION 3 OBS	--	<1	--	--	<1	<1	--	2	270	11
MULLICA 3D	200	--	79	<0	<1	--	9	<10	2400	10
MULLICA 53S	80	--	47	<0	<1	--	<3	<10	6	<10

LOCAL IDENTIFIER	LITHIUM DISSOLVED (UG/L AS LI)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY DISSOLVED (UG/L AS HG)	MOLYBDENUM, DISSOLVED (UG/L AS MO)	STRONTIUM, DISSOLVED (UG/L AS SR)	VANADIUM, DISSOLVED (UG/L AS V)	ZINC, DISSOLVED (UG/L AS ZN)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	PHENOLS TOTAL (UG/L)
MULLICA 43S	<10	35	--	<10	18	<6	6	1.7	--
MULLICA 6D	7	11	--	<10	8	<6	13	.80	--
MULLICA 56S	8	11	--	<10	8	<6	12	1.0	--
USGS-ATSION 1 OBS	--	4	<.1	--	--	--	<3	1.5	<1
USGS-ATSION 2 OBS	--	7	.1	--	--	--	4200	2.7	<1
USGS-ATSION 3 OBS	--	71	.1	--	--	--	730	1.7	<1
MULLICA 3D	<4	37	--	<10	43	<6	<3	1.5	--
MULLICA 53S	<4	17	--	<10	19	<6	44	2.1	--

Geologic unit (aquifer):

121CKKD - Kirkwood-Cohansey aquifer system
124MNSQ - Manasquan Formation

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

CAMDEN COUNTY

WELL NUMBER	LOCAL IDENTIFIER	LATITUDE	LONGITUDE	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD)	SCREENED INTERVAL (FT)	GEOLOGIC UNIT	DATE OF SAMPLE	TEMPER- ATURE (DEG C)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)
478	USGS-NEW BROOKLN PK 3 OB	39 42 15	074 56 17	111.45	520-530	211MLRW	83-06-30	15.5	365
479	USGS-NEW BROOKLN PK 4 OB	39 42 15	074 56 17	111.24	200-210	121CKKD	83-06-08	15.0	340

LOCAL IDENTIFIER	PH (STAND- ARD UNITS)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SULFATE DIS- SOLVED (MG/L AS SO4)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)
USGS-NEW BROOKLN PK 3 OB	8.2	36	9.0	3.2	71	11	2.6	2.6	.60	10
USGS-NEW BROOKLN PK 4 OB	9.8	25	9.1	.48	64	8.9	1.5	13	.60	11

LOCAL IDENTIFIER	ALKA- LINITY LAB (MG/L AS CACO3)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)	PHOS- PHORUS, DIS- SOLVED (MG/L AS PO4)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC DIS- SOLVED (UG/L AS AS)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)
USGS-NEW BROOKLN PK 3 OB	199	240	<.010	<.100	E.49	--	20	1	<1	<1
USGS-NEW BROOKLN PK 4 OB	149	243	<.010	<.100	.33	.64	10	1	<1	1

LOCAL IDENTIFIER	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	ZINC, DIS- SOLVED (UG/L AS ZN)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	PHENOLS TOTAL (UG/L)
USGS-NEW BROOKLN PK 3 OB	1	87	5	11	<.1	4	2.8	<1
USGS-NEW BROOKLN PK 4 OB	<1	8	<1	2	<.1	<3	2.3	<1

Geologic unit (aquifer):

121CKKD - Kirkwood-Cohansey aquifer system
211MLRW - Wenonah - Mount Laurel aquifer

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

MIDDLESEX COUNTY

WELL NUMBER	LOCAL IDENTIFIER	LATITUDE	LONGITUDE	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD)	SCREENED INTERVAL (FT)	GEOLOGIC UNIT	DATE OF SAMPLE	TEMPER-ATURE (DEG C)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)
439	SOUTH RIVER 2 OBS	40 26 33	074 22 00	20.69	121-126	211FRNG	83-04-11	13.5	318

LOCAL IDENTIFIER	PH (STAND-ARD UNITS)	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE FET-FLD (MG/L AS HCO3)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	SULFATE DIS-SOLVED (MG/L AS SO4)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
SOUTH RIVER 2 OBS	5.0	51	13	4.5	27	1.9	6	71	38	<.10

LOCAL IDENTIFIER	SILICA, SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	BROMIDE DIS-SOLVED (MG/L AS BR)	CADMIUM DIS-SOLVED (UG/L AS CD)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)
SOUTH RIVER 2 OBS		189	<.100	74	<1	.260	<1	20	<10	18000	<10

LOCAL IDENTIFIER	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)
SOUTH RIVER 2 OBS	11	330	<10	170	<6	25

Geologic unit (aquifer):

211FRNG - Farrington aquifer, Potomac-Raritan-Magothy aquifer system

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

MIDDLESEX COUNTY

WELL NUMBER	LOCAL IDENTIFIER	LATITUDE	LONGITUDE	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD)	SCREENED INTERVAL (FT)	GEOLOGIC UNIT	DATE OF SAMPLE	TEMPER-ATURE (DEG C)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (UNITS)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
571	PERTH AMBOY WD 8-83	40 25 28	074 19 38	15	85*	211ODBG	83-09-09	12.0	115	4.5	9.1
195	PERTH AMBOY WD 5	40 25 37	074 20 02	15	50- 80	211ODBG	83-09-09	12.0	265	4.3	35
196	PERTH AMBOY WD 1A	40 25 37	074 20 20	20	201-261	211FRNG	83-05-25	13.5	565	--	150
				20	201-261	211FRNG	83-09-09	--	127	6.4	21
570	PERTH AMBOY WD 6-83	40 25 38	074 19 50	15	60- 80	211ODBG	83-09-09	12.0	142	4.1	8.7
197	PERTH AMBOY WD 2	40 25 43	074 20 10	20	205-260	211FRNG	83-05-25	12.0	85	--	7.0
				20	205-260	211FRNG	83-09-09	12.5	318	6.0	74
434	SOUTH RIVER BORO WD 2	40 25 56	074 21 41	20	173-198	211FRNG	83-09-08	12.5	73	5.6	7.6
551	SOUTH RIVER BORO WD 6-80	40 25 48	074 21 55	47	155-208	211FRNG	83-09-08	12.0	56	5.7	6.6
346	SAYREVILLE BORO WD B	40 26 04	074 20 04	27	71- 81	211ODBG	83-09-08	13.0	400	4.6	87
352	SAYREVILLE BORO WD M	40 26 09	074 19 52	35	225-280	211FRNG	83-09-08	--	1860	5.6	520
355	SAYREVILLE BORO WD A	40 26 14	074 19 50	30	72- 82	211ODBG	83-09-08	13.0	395	4.4	88
365	DUHERNAL SAYER 4 OBS	40 26 33	074 21 20	5	148-160	211FRNG	83-09-28	13.5	6000	5.5	1700
368	SAYREVILLE BORO WD I	40 26 26	074 19 36	58	83- 94	211ODBG	83-09-08	12.0	310	4.2	12
370	HERCULES INC 6	40 26 31	074 20 53	20	164-194	211FRNG	83-09-14	--	3350	--	1100
439	SOUTH RIVER 2 OBS	40 26 33	074 22 00	20	121-126	211FRNG	83-04-11	13.5	318	5.0	71
				20	121-126	211FRNG	83-09-28	14.0	522	5.2	130
371	HERCULES INC. 5	40 26 38	074 20 22	48	182-228	211FRNG	83-09-14	--	7200	--	2200
440	HODGES BUS CO 1	40 26 47	074 22 27	15	167-195	211FRNG	83-09-08	14.5	295	5.9	51
376	HERCULES INC. 3	40 26 49	074 20 25	40	180-220	211FRNG	83-09-14	--	5200	--	2000
380	HERCULES INC. 2	40 26 59	074 20 20	47	181-237	211FRNG	83-09-14	--	730	--	170
384	HERCULES INC. 1R	40 27 05	074 20 23	59	170-225	211FRNG	83-09-14	--	800	--	190
386	EI DUPONT-PARLIN 6	40 27 01	074 19 17	103	253-314	211FRNG	83-09-09	12.0	100	5.8	7.6
389	EI DUPONT-PARLIN 5	40 27 10	074 19 10	107	257-305	211FRNG	83-09-09	12.5	127	5.8	19
392	EI DUPONT-PARLIN 1	40 27 15	074 19 24	102	237-286	211FRNG	83-09-09	13.5	340	5.7	80
393	EI DUPONT-PARLIN 3	40 27 15	074 19 32	94	246-284	211FRNG	83-09-09	13.5	1000	5.6	240
569	SAYERVILLE BORO WD T-82	40 27 38	074 17 00	90	138*	211ODBG	83-09-08	12.5	134	4.3	12
403	SAYREVILLE BORO WD Q-73	40 27 45	074 16 31	40	78-136	211ODBG	83-09-08	12.5	220	4.4	29
554	SAYREVILLE BORO WD S-80	40 27 45	074 16 45	23	210-283	211FRNG	83-09-08	12.5	56	6.0	2.1
411	SOUTH AMBOY CITY WD 8	40 28 22	074 16 30	10	209-234	211FRNG	83-09-14	--	70	--	4.7
426	SOUTH AMBOY CITY WD 9A	40 28 24	074 16 31	10	25- 47	211ODBG	83-09-14	12.5	187	4.4	23
414	SOUTH AMBOY CITY WD 10	40 28 25	074 16 32	10	39- 49	211ODBG	83-09-14	13.0	242	4.2	24
430	JERSEY CENT P&L-WERNER 7	40 29 23	074 16 51	12	135-165	211FRNG	83-09-15	13.5	3700	5.7	1100
425	EI DUPONT-PARLIN 60F	40 27 29	074 19 38	149	282-287	211FRNG	83-09-09	15.5	4020	5.8	1200
255	CARBORUNDUM CO 1	40 30 46	074 18 27	15	57- 67	211FRNG	83-09-15	13.5	280	6.8	7.2
473	HAAGEN DAZS INC.	40 32 33	074 16 33	30	39- 59	211FRNG	83-09-15	--	1310	--	270
478	AMER CYANAMID CO 2A	40 32 36	074 16 16	9	45- 60	211FRNG	83-09-15	14.5	1130	6.0	200

* Total depth of well.

Geologic unit (aquifer):

211ODBG - Old Bridge aquifer of the Magothy Formation
211FRNG - Farrington aquifer of the Raritan Formation

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

MONMOUTH COUNTY

WELL NUMBER	LOCAL IDENTIFIER	LATITUDE	LONGITUDE	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD)	SCREENED INTERVAL (FT)	GEOLOGIC UNIT	DATE OF SAMPLE	TEMPER-ATURE (DEG C)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (UNITS)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
29	BRIELLE BORO WD 1	40 06 44	074 03 44	35	130- 150	121CKKD	83-09-20	14.5	82	6.3	7.5
30	BRIELLE BORO WD 2	40 06 45	074 03 45	33	690- 750	211EGLS	83-09-20	20.0	188	7.6	1.2
233	MANASQUAN BORO WD 6	40 07 10	074 03 29	10	180*	121CKKD	83-09-20	13.0	69	4.9	10
234	MANASQUAN BORO WD 3	40 07 12	074 03 28	15	118*	121CKKD	83-09-20	13.5	91	4.6	14
235	MANASQUAN BORO WD 2R	40 07 12	074 03 28	21	103- 118	121CKKD	83-09-20	13.5	90	4.7	14
237	MANASQUAN BORO WD 5	40 07 14	074 03 29	15	98- 117	121CKKD	83-09-20	13.5	64	4.9	9.6
512	SEA GIRT BORO WD 7-80	40 08 02	074 02 30	21	92- 124	121CKKD	83-09-20	13.5	74	5.8	10
383	SPRING LAKE BORO WD 1	40 08 49	074 02 07	15	631- 711	211EGLS	83-09-21	19.0	180	7.9	1.2
387	SPRING LAKE HTS WD 1-53	40 08 58	074 03 09	60	570- 600	211MLRW	83-09-20	17.5	193	8.2	1.0
391	SPRING LAKE HTS WD 4-74	40 09 29	074 02 11	20	485- 560	211MLRW	83-09-20	--	179	7.8	1.1
386	SPRING LAKE BORO WD 4	40 09 52	074 01 49	15	600- 670	211EGLS	83-09-21	19.0	177	7.8	1.0
23	BELMAR BORO WD 13-73	40 10 39	074 01 47	19	555- 605	211EGLS	83-09-21	19.0	190	7.8	1.1
26	BELMAR BORO WD 4-ELEC	40 11 02	074 00 45	15	601- 671	211EGLS	83-09-21	19.5	183	7.7	.9
13	AVON-BY-THE-SEA WD 4	40 11 37	074 01 21	29	1105-1165	211MRPA	83-09-21	--	--	--	2.1
14	AVON-BY-THE-SEA WD 1	40 11 38	074 01 25	28	424- 504	211MLRW	83-09-21	17.5	241	7.9	1.8
1	ALLENHURST BORO WD 4	40 14 01	074 00 25	17	525- 565	211EGLS	83-09-21	--	209	7.5	1.5

* Total depth of well.

Geologic unit (aquifer):

121CKKD - Kirkwood-Cohansey aquifer system
211MLRW - Wenonah-Mount Laurel aquifer
211EGLS - Englishtown aquifer
211MRPA - Potomac-Raritan-Magothy aquifer system

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

MORRIS COUNTY

WELL NUMBER	LOCAL IDENTIFIER	LATITUDE	LONGITUDE	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD)	SCREENED INTERVAL (FT)	GEOLOGIC UNIT	DATE OF SAMPLE	TEMPER-ATURE (DEG C)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)
3	USGS-DRIVER 2 OBS	40 47 48	074 24 19	178.26	102-112	112SFDF	83-06-16	11.5	700
27	BERKSHIRE VALLEY TW 9	40 55 31	074 36 19	725.64	78- 98	112SFDF	83-06-14	10.5	220
28	GREEN POND TW 5	41 02 07	074 27 00	758.56	80-120	112SFDF	83-06-22	10.0	266

LOCAL IDENTIFIER	PH (STAND-ARD UNITS)	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE FET-FLD (MG/L AS HCO3)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	SULFATE DIS-SOLVED (MG/L AS SO4)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
USGS-DRIVER 2 OBS	8.1	330	81	31	16	1.3	170	13	210	<.10
BERKSHIRE VALLEY TW 9	8.2	110	25	11	4.2	.60	110	12	16	<.10
GREEN POND TW 5	8.2	140	35	12	3.3	.50	140	4.9	22	.10

LOCAL IDENTIFIER	SILICA, DIS-SOLVED (MG/L AS SIO2)	ALKA-LINITY LAB (MG/L AS CACO3)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)	PHOS-PHORUS, DIS-SOLVED (MG/L AS PO4)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	ARSENIC DIS-SOLVED (UG/L AS AS)	CADMIUM DIS-SOLVED (UG/L AS CD)
USGS-DRIVER 2 OBS	15	144	497	<.010	<.100	E.09	.39	30	1	<1
BERKSHIRE VALLEY TW 9	20	82	133	<.010	.300	<.05	.18	<10	1	<1
GREEN POND TW 5	12	115	174	<.010	.100	<.05	.27	10	1	<1

LOCAL IDENTIFIER	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	ZINC, DIS-SOLVED (UG/L AS ZN)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	PHENOLS TOTAL (UG/L)
USGS-DRIVER 2 OBS	8	8	99	<1	410	.3	17	1.7	1
BERKSHIRE VALLEY TW 9	<1	1	12	1	<1	<.1	22	1.5	<1
GREEN POND TW 5	8	2	100	3	260	<.1	90	1.4	<1

Geologic unit (aquifer):

112SFDF - Stratified drift

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

OCEAN COUNTY

WELL NUMBER	LOCAL IDENTIFIER	LATITUDE	LONGITUDE	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD)	SCREENED INTERVAL (FT)	GEOLOGIC UNIT	DATE OF SAMPLE	TEMPERATURE (DEG C)	SPECIFIC CONDUCTANCE (UMHOS)
773	BASS RIVER ST FOREST1-83	39 38 55	074 20 08	45.00	27- 37	121CKKD	83-06-02	12.5	33
513	USGS-GARDEN ST PKWY OBS1	39 47 44	074 14 18	44.25	18- 21	1121CKKD	83-05-24	11.0	43
514	USGS-GARDEN ST PKWY OBS2	39 47 44	074 14 18	43.82	306-316	121CKKD	83-05-24	13.0	53
486	CRAMMER OBS	39 57 14	074 22 34	179.00	69*	121CKKD	83-06-07	15.5	169
138	COLLIERS MILLS TW 1	40 04 14	074 27 02	136.52	417-427	211EGLS	83-05-19	14.5	165
139	USGS-COLLIERS MILLS TW 2	40 04 14	074 27 02	135.76	161-171	125VNCN	83-05-23	13.5	146
140	USGS-COLLIERS MILLS TW 3	40 04 14	074 27 02	135.15	257-267	211MLRW	83-06-21	13.5	154

LOCAL IDENTIFIER	PH (STANDARD UNITS)	HARDNESS (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE FET-FLD (MG/L AS HCO3)	CHLORIDE, DISSOLVED (MG/L AS CL)	SULFATE DISSOLVED (MG/L AS SO4)	FLUORIDE, DISSOLVED (MG/L AS F)
BASS RIVER ST FOREST1-83	5.6	5	.98	.55	5.0	.30	8	6.6	1.1	<.10
USGS-GARDEN ST PKWY OBS1	5.8	5	.91	.68	4.5	.40	8	6.9	3.0	<.10
USGS-GARDEN ST PKWY OBS2	5.8	7	1.9	.48	2.4	2.1	--	3.4	13	<.10
CRAMMER OBS	5.9	11	2.6	1.0	20	1.0	13	36	10	.10
USGS-COLLIERS MILLS TW 1	8.3	76	25	3.3	2.1	4.2	110	1.9	6.2	.20
USGS-COLLIERS MILLS TW 2	8.6	61	18	4.0	1.6	6.2	--	1.9	5.7	.20
USGS-COLLIERS MILLS TW 3	8.0	69	22	3.4	1.8	4.8	110	2.6	3.6	.30

LOCAL IDENTIFIER	SILICA, DISSOLVED (MG/L AS SIO2)	ALKALINITY LAB (MG/L AS CACO3)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	PHOSPHORUS, DISSOLVED (MG/L AS PO4)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC DISSOLVED (UG/L AS AS)	CADMIUM DISSOLVED (UG/L AS CD)
BASS RIVER ST FOREST1-83	7.1	5.0	31	<.010	<.100	.78	.06	10	1	2
USGS-GARDEN ST PKWY OBS1	6.2	5.0	26	<.010	.200	E.05	.30	<10	<1	1
USGS-GARDEN ST PKWY OBS2	14	2.0	38	<.010	.100	E.05	.45	10	<1	1
CRAMMER OBS	3.8	9.0	95	<.010	--	E2.4	.12	9000	<1	1
USGS-COLLIERS MILLS TW 1	<.0	78	111	<.010	.100	E.57	.39	<10	<1	<1
USGS-COLLIERS MILLS TW 2	8.0	64	90	<.010	<.100	E.31	.21	<10	1	--
USGS-COLLIERS MILLS TW 3	11	77	96	<.010	.100	.09	.15	<10	1	--

LOCAL IDENTIFIER	CHROMIUM, DISSOLVED (UG/L AS CR)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY DISSOLVED (UG/L AS HG)	ZINC, DISSOLVED (UG/L AS ZN)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	PHENOLS TOTAL (UG/L)
BASS RIVER ST FOREST1-83	<1	10	3	1	8	<.5	14	.60	<1
USGS-GARDEN ST PKWY OBS1	<1	8	940	10	14	.1	610	.50	--
USGS-GARDEN ST PKWY OBS2	<1	<1	3700	11	59	.1	22	.60	--
CRAMMER OBS	<1	1	3100	1	91	<.1	56	1.5	2
USGS-COLLIERS MILLS TW 1	2	8	610	5	<1	<.1	15	.80	<1
USGS-COLLIERS MILLS TW 2	1	1	64	1	4	<.1	<3	.50	<1
USGS-COLLIERS MILLS TW 3	2	1	120	<1	7	<.1	<3	2.2	<1

* Total depth of well

Geologic unit (aquifer):

121CKKD - Kirkwood-Cohansey aquifer system
125VNCN - Vincentown Formation
211MLRW - Wenonah-Mount Laurel aquifer
211EGLS - Englishtown aquifer

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

OCEAN COUNTY

WELL NUMBER	LOCAL IDENTIFIER	LATITUDE	LONGITUDE	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD)	SCREENED INTERVAL (FT)	GEOLOGIC UNIT	DATE OF SAMPLE	TEMPER- ATURE (DEG C)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)
538	SEASIDE HTS BORO WD 1R	39 56 35	074 04 41	5	144-175	121CKKD	83-09-29	14.0	615	6.4	150
617	SEASIDE HTS BORO WD 5-78	39 56 52	074 04 42	5	175*	121CKKD	83-09-29	14.0	225	6.0	49
579	PT PLEAS BCH BORO WD 11	40 05 12	074 02 51	5	130-143	121CKKD	83-09-29	14.0	320	6.8	74
807	PT PLEAS BCH BORO WD 12	40 05 36	074 02 51	5	131*	121CKKD	83-09-29	14.0	820	6.8	220
523	PT PLEAS BCH BORO WD 10	40 05 51	074 02 43	5	87-130	121CKKD	83-09-29	14.0	970	6.6	280

*Total depth of well.

Geologic unit (aquifer):

121CKKD - Kirkwood-Cohansey aquifer system

PAGE

Absecon Creek at Absecon..........231,256
Accuracy of field data and computed results..... 12
Acknowledgments.......... 1
Acre-foot, definition of.......... 2
Adenosine triphosphate, definition of.......... 2
Albertson Brook near Hammonton.......... 242
Algae, definition of.......... 2
Algal growth potential (AGP), definition of..... 2
Allaire State Park C observation well.......... 284
Allendale, Hohokus Brook at.......... 244
  Ramsey Brook at.......... 245
Allenwood, Manasquan River at.......... 247
Ambrose Brook at Middlesex.......... 241
American Cyanamid 1 observation well.......... 283
Aquifer, definition of.......... 2
Aquifer codes and geologic names.......... 3
Artesian, definition of.......... 3
Artificial substrate, definition of.......... 7
Ash mass, definition of.......... 3
Assiscong Creek at Bartles Corners.......... 240
Atco, Mullica River near..........242,254
Atlantic City, Beach Thorofare at.......... 256
Atlantic City WD 600 observation well.......... 260
Atlantic County, ground-water levels.......... 257
  ground-water quality.......... 307
Atsion, Mullica River at.......... 242
  Mullica River at outlet of Atsion Lake at..... 212
  Springers Brook near.......... 242
Awosting, Wanaque River at.......... 64

Back Brook near Reaville.......... 241
  tributary near Ringoes.......... 129
Bacteria, definition of.......... 3
Baldwin Creek at Pennington.......... 246
Ballantine 8 observation well.......... 274
Barclay Brook near Englishtown..........193,242
Barnegat Bay at Bay Shore.......... 255
  at Mantoloking.......... 255
Bartles Corners, Assiscong Creek at.......... 241
Bass River, East Branch, near New Gretna.......... 229
Batsto, Mullica River near.......... 214
Batsto River at Batsto.......... 219
  at Pleasant Mills..........222,255
Bay Shore, Barnaget Bay at.......... 255
Beach Haven, Little Egg Harbor at.......... 255
Beach Thorofare at Atlantic City.......... 256
Bear Brook at Route 535 near Locust Corner...... 245
Bear Swamp Brook near Oakland.......... 240
Beden Brook near Hopewell.......... 246
  near Rocky Hill..........165,246
Bedload, definition of.......... 3
Bed material, definition of.......... 3
Belle Mead, Pike Run at.......... 167
  Royce Brook tributary near.......... 170
Belleville, Second River at.......... 245
Berkeley Heights, Blue Brook at Seeleys Pond Dam
  near.......... 247
Bernardsville, Passaic River near.......... 243
Berryland, Hospitality Branch at.......... 242
Big Brook at Marlboro.......... 247
Biochemical oxygen demand, definition of.......... 4
Biomass, definition of.......... 3
Black Creek near Vernon.......... 35,239
Black River: See Lamington River
Blackwells Mills, Millstone River at.......... 168
Blawenburg, Rock Brook near.......... 246
Blue Anchor, Blue Anchor Brook near.......... 248
  Great Egg Harbor River near.......... 234
Blue Brook at Seeleys Pond Dam near Berkeley
  Heights.......... 247
Blue green algae, definition of.......... 6
Boonton Reservoir.......... 91
Boonton, Rockaway River above Reservoir, at..... 51
  Rockaway River below Reservoir, at.......... 52
Bottom material.......... 4
Bound Brook, Raritan River below Calco Dam, at.. 171
  Middle Brook at.......... 253
  Raritan River at Queens Bridge at.......... 174
  at South Plainfield.......... 241
Briarwood School observation well.......... 290
Brookville, Oyster Creek near.......... 210
Browntown observation well.......... 280
Browntown, Deep Run near.......... 242

PAGE

Budd Lake, South Branch Raritan River at outlet
  of.......... 106
Burlington County, ground-water levels.......... 263
  ground-water quality.......... 308
Burnt Mills, Lamington River at..........149,253
  North Branch Raritan River at..........135,253
Bushkill Brook at Rockefellows Mills.......... 123
Butler Place 1 observation well.......... 266
Butler Place 2 observation well.......... 267

Camden County, ground-water levels.......... 268
  ground-water quality.......... 309
Canistear Reservoir.......... 91
Canoe Brook 30 observation well.......... 273
Cape May, Cape May Harbor at.......... 256
Carnegie Lake, Millstone River at, at Princeton.193,246
Cedar Creek at Lanoka Harbor..........248,255
Centerville, Pleasant Run at.......... 241
Cells/volume, definition of.......... 4
Celsius to Fahrenheit conversion table.......... 13
Cfs-day, definition of.......... 4
Charlotteburg Reservoir.......... 91
Chatham, Passaic River near.......... 46
Chemical oxygen demand, definition of.......... 4
Chesilhurst, Wildcat Branch at.......... 248
Chester, North Branch Raritan River near..........132,241
Chlorophyll, definition of.......... 4
Clarks Mills, Pine Brook at.......... 241
Clarksville, Duck Pond Run at.......... 246
Clinton Reservoir.......... 91
Clinton, Spruce Run at.......... 119
Closter, Tenakill Brook at.......... 243
Collection and computation of surface-water data 10
Collection and examination of water-quality data 12
Collection of data, ground-water.......... 14
Colliers Mill TW 1 observation well.......... 300
Colliers Mill TW 2 observation well.......... 302
Colliers Mill TW 3 observation well.......... 301
Colliers Mill TW 4 observation well.......... 303
Colonia, South Branch Rahway River at.......... 240
Color unit, definition of.......... 4
Colts Neck, Yellow Brook at.......... 195
Commonwealth Water Company, diversions.......... 94
Computations, accuracy of results.......... 11
Contents, definition of.......... 4
Continuing record station, definition of.......... 4
Control, definition of.......... 4
Control structure, definition of.......... 4
Cooperation.......... 1
Crammer observation well.......... 297
Crest-stage partial-record stations.......... 243
Crook Horn Creek at Ocean City.......... 256
Cubic feet per second per square mile,
  definition of.......... 4
Cubic foot per second, definition of.......... 4
Cumberland County, ground-water levels.......... 272

Darlington, Darlington Brook at.......... 240
    Ramapo River near.......... 240
Deep Run at Weymouth.......... 242
Deep Run near Browntown.......... 242
Definition of terms.......... 2
De Forest Lake, NY.......... 42
Delaware and Raritan Canal, diversion at.......... 193
Diatoms, definition of.......... 6
Discharge, definition of.......... 4
Discharge measurements at miscellaneous sites... 249
Dissolved, definition of.......... 5
Diversity index, definition of.......... 5
Dover, Rockaway River at Warren Street, at...... 243
Downstream order and station number.......... 9
Drainage area, definition of.......... 5
Drainage basin, definition of.......... 4
Dry mass, definition of.......... 3
Duck Pond Run at Clarksville.......... 246
  near Princeton Junction.......... 246

Echo Lake.......... 92
Elizabeth River at Ursino Lake at Elizabeth..... 95
Elizabethtown Water Company, diversions.......... 193
Elmwood Park, Fleischer Brook at Market Street
  at.......... 244
Englewood, Metzler Brook at.......... 243

PAGE

Englishtown, Barclay Brook near..........193,242
  Matchaponix Brook near.......... 241
  McGelliards Brook at.......... 241
  Milford Brook near.......... 241
Essex County, ground-water levels.......... 273
Fair Lawn, Saddle River at.......... 85
Far Hills, North Branch Raritan River near.......... 134
Farmingdale, Mingamahone Brook at.......... 247
Farrington Dam, Lawrence Brook at.......... 182
Fecal coliform bacteria, definition of.......... 3
Fecal streptococcal bacteria, definition of.......... 3
Fischer observation well.......... 281
Fleischer Brook at Market Street at Elmwood Park 244
Flemington, Neshanic River near.......... 241
  Walnut Brook near.......... 245
Folsom, Great Egg Harbor River at.......... 235
Forsgate 1 observation well.......... 278
Forsgate 3 observation well.......... 277
Forsgate 4 observation well.......... 276
Fourmile Branch at New Brooklyn.......... 248
Franklin, Wallkill River at.......... 30,239

Gage height, definition of.......... 4
Gaging station, definition of.......... 5
Galen Hall observation well.......... 259
Georgia, Manasquan River near..........202,247
Glen Gardner, Spruce Run at.......... 113
  Spruce Run near..........114,264
Glenmoore, Stony Brook at.......... 245
Goffle Brook at Hawthorne.......... 240
Great Channel at Stone Harbor.......... 256
Great Egg Harbor Bay at Ocean City.......... 256
Great Egg Harbor River at Folsom.......... 235
  at Weymouth.......... 236
  near Blue Anchor.......... 234
  near Sicklerville.......... 232
Great Egg Harbor River basin, crest-stage
  partial-record stations in.......... 248
  Discharge measurements at low-flow partial-
    record stations in.......... 242
Green Acres observation well.......... 292
Green algae, definition of.......... 6
Green Brook at Plainfield.......... 177
  at Seeley Mills.......... 176
Green Pond TW 5 observation well.......... 294
Green Pond Brook at Picatinny Arsenal.......... 49
  at Wharton.......... 50
Greenwood Lake.......... 92
Ground-water level records.......... 257
  Explanation of.......... 12
Ground-water quality records.......... 307
Grovers Mill, Millstone River at.......... 160
  Millstone River at Southfield Road near.......... 245

Hackensack River at New Milford.......... 41
  at Rivervale.......... 37
  at West Nyack, NY.......... 36
Hackensack River basin, diversions.......... 43
  Elevations, reservoir and lake.......... 42
  Maximum discharge at crest-stage partial-
    record stations.......... 243
  Reservoirs in,.......... 42
Hackensack Water Co., diversions.......... 43
Hamden Pumping Station, diversions.......... 193
Hammonton, Albertson Brook near.......... 242
Hammonton Creek at Wescoatville.......... 214
Hardness, definition of.......... 5
Harrisons Brook at Liberty Corner.......... 239
Harrisville, Oswego River at.......... 226
Hart Brook near Pennington.......... 246
Hatfield 2 observation well.......... 304
Head of River, Tuckahoe River at..........238,256
Heathcote Brook at Kingston.......... 241
High Bridge, South Branch Raritan River at Arch
  Street at.......... 111
  South Branch Raritan River near.......... 110
Highland Park, Mill Brook at.......... 241
High tide, definition of.......... 5
Hohokus Brook at Allendale.......... 244
  at Hohokus.......... 84
Holland Brook at Readington.......... 131
Holmdel, Willow Brook near.......... 191
Honey Branch 10 observation well.......... 275

PAGE

Hopewell, Beden Brook near.......... 246
Hospitality Branch at Berryland.......... 242
Hudson River basin, discharge measurements at
    low flow sites.......... 239
Hulsart observation well.......... 279
Hydrologic bench-mark station, definition of.......... 9
Hydrologic conditions, summary of.......... 2
Hydrologic unit, definition of.......... 5

Instantaneous discharge, definition of.......... 4
Introduction.......... 1
Ironia, Lamington (Black) River near.......... 138
Island Beach 1 observation well.......... 296
Island Beach 3 observation well.......... 295

Jenkins, West Branch Wading River near.......... 223
Jersey City, diversion.......... 94
Jobs Point observation well.......... 258
Johns-Manville Corporation, diversions.......... 193
Jumping Brook near Neptune City.......... 200

Keyport Borough WD 4 observation well.......... 289
Keyport, Luppatatong Creek at.......... 255
Kingston, Heathcote Brook at.......... 241
  Millstone River at.......... 164

Lake Mohawk, Wallkill River at outlet of, at
  Sparta.......... 239
Lakes and reservoirs:
  Boonton Reservoir.......... 91
  Canistear Reservoir.......... 91
  Charlotteburg Reservoir.......... 91
  Clinton Reservoir.......... 91
  De Forest Lake.......... 42
  Echo Lake.......... 92
  Farrington Reservoir.......... 182
  Greenwood Lake.......... 92
  Oak Ridge Reservoir.......... 91
  Oradell Reservoir.......... 42
  Round Valley Reservoir.......... 192
  Splitrock Reservoir.......... 91
  Spruce Run Reservoir.......... 192
  Swimming River Reservoir.......... 196
  Tappan, Lake.......... 42
  Wanaque Reservoir.......... 92
  Woodcliff Lake.......... 42
Lakewood, North Branch Metedeconk River near.......... 206
Lamington (Black) River at Burnt Mills.......... 149
  at Succasunna.......... 137
  near Ironia.......... 138
  near Pottersville.......... 141
  tributary No. 2 near Pottersville.......... 144
Land surface datum, definition of.......... 5
Lanoka Harbor, Cedar Creek at..........248,255
Lawrence Brook at Davidsons Mill Road near
  Patricks Corner.......... 180
  at Farrington Dam.......... 182
Liberty Corner, Harrisons Brook at.......... 239
Little Bear Brook at Penns Neck.......... 245
Little Egg Harbor, Beach Haven at.......... 255
Little Falls, Passaic River at.......... 77
Locust Corner, Bear Brook at Route 535 near.......... 245
Lodi, Saddle River at.......... 87
Longport observation well.......... 257
Low-flow partial-record stations.......... 239
Low tide, definition of.......... 5
Ludlam Thorofare at Sea Isle City.......... 256
Luppatatong Creek at Keyport.......... 255

Macs Brook at Somerville.......... 155
Macopin Intake Dam, Pequannock River at.......... 63
Mahwah, Ramapo River near.......... 70
Mahwah River near Suffern, NY.......... 69
Manahawkin Bay near Manahawkin.......... 255
Manalapan Brook at Bridge Street at Spotswood.......... 188
  at Federal Road near Manalapan.......... 185
  at Spotswood.......... 187
  near Manalapan.......... 242
Manalapan, Millstone River near.......... 158
Manalapan 1 observation well.......... 285
Manasquan River at Allenwood.......... 247
  at Squankum.......... 205
  near Georgia..........202,247

PAGE
Manasquan River basin, crest-stage partial-record stations in 247
Mantoloking, Barnegat Bay at 255
Manville, Raritan River at 156
Marlboro, Big Brook at 247
Marlboro 1 observation well 287
Marsh Bog Brook at Squankum 203
Martinsville, West Branch Middle Brook near 172
Matchaponix Brook near Englishtown 241
  at Mundy Avenue at Spotswood 183
Maxwell, West Branch Wading River at 224
McGelliards Brook at Englishtown 241
Mean concentration, definition of 7
Mean discharge, definition of 4
Mean high or low tide, definition of 5
Mercer County ground-water levels 275
Metamorphic stage, definition of 5
Metedeconk River, North Branch, near Lakewood 206
Methylene blue active substance, definition of 5
Metzler Brook at Englewood 243
Micrograms per gram, definition of 5
Micrograms per liter, definition of 5
Middle Brook at Bound Brook 253
  West Branch, near Martinsville 172
  West Branch, near Somerville 173
Middle Valley, South Branch Raritan River at 108
Middlebush, Six Mile Run near 247
Middlesex, Ambrose Brook at 241
Middlesex County, ground-water levels 276
  ground-water quality 310
Milford Brook at Englishtown 241
Mill Brook at Highland Park 241
Milligrams per liter, definition of 5
Millington, Passaic River near 44
Millstone River at Blackwells Mills 168
  at Carnegie Lake at Princeton 246
  at Grovers Mill 160
  at Kingston 164
  at Southfield Road near Grovers Mill 245
  at Plainsboro 245
  at Weston 169
  near Manalapan 159
Mingamahone Brook at Farmingdale 247
Miscellaneous sites, discharge measurement at 249
Molly Ann Brook at North Haledon 244
  at Paterson 240
Monks, Wanaque River at 65
Monmouth County, ground-water levels 284
  ground-water quality 312
Morris County, ground-water levels 290
  ground-water quality 313
Morristown, Whippany River at 55
Mount observation well 263
Mount Freedom 2 observation well 291
Mulhockaway Creek at Van Syckel 116
Mullica River at Atsion 242
  at outlet of Atsion Lake at Atsion 209
  at Pleasant Mills 212
  near Atco 242,248
  near Batsto 214
  near Port Republic 255
Mullica River basin, crest-stage partial-record stations in 248
  Discharge measurements at low-flow partial-record stations in 242
Musquapsink Brook at Westwood 243
  near Westwood 243

National Geodetic Vertical Datum of 1929 (NGVD of 1929) 5
National stream-quality accounting network (NASQUAN) 10
Natural substrate, definition of 8
Navesink River basin, crest-stage partial-record in 247
  Discharge measurements at miscellaneous sites in 254
Neptune City, Jumping Brook near 200
  Shark River near 197
Nescochague Creek at Pleasant Mills 242
Neshanic River at Reaville 122
  near Flemington 241
Newark, City of, diversions 94

PAGE
New Brooklyn, Fourmile Branch at 248
New Brooklyn Park 1 observation well 268
New Brooklyn Park 2 observation well 269
New Brooklyn Park 3 observation well 270
New Gretna, East Branch Bass River near 229
New Milford, Hackensack River at 41
NJ-WRD well number 5
North Haledon, Molly Ann Brook at 244
North Jersey District Water Supply Commission, diversions 94
Numbering system for wells and miscellaneous sites 10

Oak Ridge Reservoir 91
Oakland, Bear Swamp Brook near 240
  Pond Brook at 240,243
Oceanville 1 observation well 261
Ocean City, Crook Horn Creek at 256
  Great Egg Harbor Bay at 256
Ocean County, ground-water levels 295
  ground-water quality 314
Old Bridge, South River at 190
  South River below Duhernal Dam at 191
Organic mass, definition of 3
Organism, definition of 5
Organism count/area, definition of 5
Organism count/volume, definition of 5
Oswego Lake 2 observation well 264
Oswego River at Harrisville 226
Other data available 12
Oyster Creek near Brookville 210

Packanack Lake, Pompton River at 75
Papakating Creek at Sussex 34
Partial-record stations, crest-stage 243
  Definition of 5
  Low-flow 239
  Tidal Crest-stage 255
Particle size, definition of 5
  classification 5
Pascack Brook at Westwood 40
Passaic, Third River at 90
Passaic River at Little Falls 77
  at Pine Brook 60
  at Two Bridges 61,239
  near Bernardsville 243
  near Chatham 46
  near Millington 44
  at Stirling 239
Passaic River basin, crest-stage partial-record stations in 243
  Discharge measurements at low-flow partial-record stations in 249
  Diversions 94
  Gaging-station records in 44
  Reservoirs in, ... 91
    Elevation 87
Passaic Valley Water Commission, diversions 94
Patricks Corner, Lawrence Brook at Davidsons Mill Road near 180
Peckman River at Ozone Avenue at Verona 244
  at West Paterson 240
Pennington, Baldwin Creek at 246
  Hart Brook near 246
Penns Neck, Little Bear Brook at 245
Penn State Forest Shallow observation well 265
Pequannock River at Macopin Intake Dam 63
Percent composition, definition of 6
Periphyton, definition of 6
Perth Amboy, Raritan River at 255
Pesticides, definition of 6
  Program 10
Peters Brook near Raritan 154
Phytoplankton, definition of 6
Picatinny Arsenal, Green Pond Brook at 49
Picocurie, definition of 6
Pike Run at Belle Mead 167
Pine Brook at Clarks Mills 241
Pine Brook, Passaic River at 60
  Rockaway River at 53,239
  Whippany River near 58
Plainfield, Green Brook at 177
Plainsboro, Millstone River at 245

PAGE

Plankton, definition of............ 6
Pleasant Mills, Batsto River at............222,255
  Mullica River at............ 212
  Nescochague Creek at............ 242
Pleasant Run at Centerville............ 241
Polychlorinated biphenyls, definition of............ 6
Pompton Lakes, Ramapo River at............ 73
Pompton Plains, Pompton River at............ 74
Pompton River at Packanack Lake............ 75
  at Pompton Plains............ 74
Pond Brook at Oakland............240,243
Port Republic, Mullica River near............ 255
Pottersville, Lamington (Black) River near............ 141
  Lamington (Black) River tributary No. 2 near.. 144
  Upper Cold Brook near............ 143
Preakness (Signac) Brook near Preakness............ 244
Primary productivity, definition of............ 6
Princeton Junction, Duck Pond Run near............ 246
Princeton, Millstone River at Carnegie Lake at.. 246
  Stony Brook at............ 161
Publications, surface water............ 12
  Ground water............ 15
  Water quality............ 14
  techniques of water-resource investigations... 19

Quality of ground-water records............ 307

Radiochemical program............ 9
Radioisotopes, definition of............ 6
Ragovin 2100 observation well............ 272
Rahway River basin, discharge measurements at
    low-flow partial-record stations in............ 240
Rahway River at Rahway............ 103
  Robinsons Branch, at Maple Avenue at Rahway... 105
  near Springfield............ 240
  South Branch, at Colonia............ 251
  West Branch, at West Orange............ 98
Ramapo River at Pompton Lakes............ 73
  at Suffern, NY............ 68
  near Darlington............ 240
  near Mahwah............ 70
Ramapo River diversions............ 94
Ramsey Brook at Allendale............ 245
Raritan, Peters Brook near............ 154
  North Branch Raritan River near............ 151
  Raritan River at............ 152
Raritan River at Manville............ 156
  at Perth Amboy............ 255
  at Queens Bridge at Bound Brook............ 174
  below Calco Dam, at Bound Brook............ 171
  North Branch, at Burnt Mills............ 135
    near Chester............132,241
    near Far Hills............ 134
    at North Branch............ 245
    near Raritan............ 151
  South Branch at Arch Street at High Bridge.... 111
    at Middle Valley............108,240
    at outlet of Budd Lake............106,240
    at South Branch............ 130
    at Stanton............ 122
    at Three Bridges............ 125
    near High Bridge............ 110
Raritan River basin, crest-stage partial-record
    stations in............ 245
  Discharge measurements at low-flow partial-
    record stations in............ 253
  Discharge measurements at miscellaneous sites. 253
  Diversions............ 193
  Reservoirs in,............ 193
  Elevation............ 193
Readington, Holland Brook at............ 131
Reaville, Back Brook near............ 241
  Neshanic River at............ 126
Records collected by other agencies............ 12
Recoverable from bottom material, definition of. 6
Red Bank, Swimming River near............ 196
References, selected............ 15
Remark Codes for water-quality data............ 14
Reservoirs: See Lakes and reservoirs
Ridgefield, Wolf Creek at............239,243
Ridgewood, Saddle River at............ 83
Ringoes, Back Brook tributary near............ 129
  Third Neshanic River near............ 241

PAGE

River mile, definition of............ 7
Rivervale, Hackensack River at............ 37
Robinsons Branch Rahway River at Maple Ave. at
  Rahway............ 105
Rock Brook near Blawenburg............ 246
Rockaway Creek at Whitehouse............ 146
  South Branch, at Whitehouse............ 145
Rockaway River above Reservoir, at Boonton............ 51
  at Dover............ 239
  at Warren Street at Dover............ 243
  at Pine Brook............ 53,239
  below Reservoir, at Boonton............ 52
Rockefellows Mills, Bushkill Brook at............ 123
Rocky Hill, Beden Brook near............ 246
Round Valley Reservoir data............ 192
Royce Brook tributary near Belle Mead............ 170
Runoff in inches, definition of............ 7

Saddle River at Lodi............ 83
  at Fair Lawn............ 85
  at Ridgewood............ 83
  at Upper Saddle River............240,244
Sandy Hook SP 1 oservation well............ 288
Scholler 1 observation well............ 262
Schweitzer observation well............ 306
Screened interval, definition of............ 7
Sea Isle City, Ludlam Thorofare at............ 256
Second River at Belleville............ 245
Sediment, definition of............ 7
  measurement of............ 13
Seeley Mills, Green Brook at............ 176
Seeleys Pond Dam near Berkeley Heights, Blue
  Brook at............ 247
Shark River near Neptune City............ 197
Sicklerville, Great Egg Harbor River near............ 232
Singac Brook at Singac............ 240
Six Mile Run near Middlebush............ 247
Solute, definition of............ 7
Somerville, Macs Brook at............ 155
  West Branch Middle Brook at............ 173
South Plainfield, Bound Brook at............ 241
South Branch, South Branch Raritan River at............ 130
South River at Old Bridge............ 190
  below Duhernal Dam at Old Bridge............ 191
South River 2 observation well............ 282
Sparta, Wallkill River at outflow of Lake
  Mohawk at............ 239
Special networks and programs............ 9
Specific conductance, definition of............ 7
Splitrock Reservoir............ 91
Spotswood, Manalapan Brook at Bridge Street at.. 188
  Manalapan Brook at............ 187
  Matchaponix Brook at Mundy Avenue at............ 183
Spring Valley Water Company, diversions............ 43
Springers Brook near Atsion............ 242
Springfield, Rahway River near............ 100
Spruce Run at Clinton............ 119
  at Glen Gardner............ 113
  near Glen Gardner............ 114
Spruce Run Reservoir data............ 192
Squankum, Manasquan River at............ 205
  Marsh Bog Brook at............ 203
Stafford Forge, Westecunk Creek at............ 211
Stag Brook near Mahwah............ 240
Stage and water-discharge records, explanation
  of............ 10
Stage-discharge relation, definition of............ 7
Stanton, South Branch Raritan River at............ 122
Stirling, Passaic River at............ 239
Stone Harbor, Great Channel at............ 256
Stony Brook at Glenmoore............ 245
  at Princeton............ 161
  at Watchung............ 176
  East Branch, at Best Lake at Watchung............ 175
Streamflow, definition of............ 7
Substrate, definition of............ 7
Succasunna, Lamington (Black) River at............ 137
Suffern, NY, Mahwah River near............ 69
  Ramapo River at............ 68
Surface area, definition of............ 7
Surficial bed material, definition of............ 7
Sussex, Papakating Creek at............ 34
  Wallkill River near............ 32

PAGE

Suspended, recoverable, definition of............ 7
Suspended sediment, definition of................ 7
Suspended-sediment concentration, definition of. 7
Suspended-sediment discharge, definition of..... 7
Suspended-sediment load, definition of.......... 7
Suspended, total, definition of.................. 8
Swimming River near Red Bank..................... 196

Tappan, Lake..................................... 42
Taxonomy, definition of.......................... 8
Ten Mile Lock, diversions........................ 193
Tenakill Brook at Closter........................ 243
Terms, definition of............................. 2
Thermograph, definition of....................... 8
Third Neshanic River near Ringoes................ 241
Third River at Passaic........................... 90
Three Bridges, South Branch Raritan River at.... 125
Tidal crest-stage stations....................... 255
Time weighted average, definition of............. 8
Toms River Chem. 84 observation well............. 299
Toms River near Toms River....................... 207
Toms River TW 2 observation well................. 298
Tons per acre-foot, definition of................ 8
Tons per day, definition of...................... 8
Total, definition of............................. 8
Total coliform bacteria, definition of........... 3
Total in bottom material, definition of.......... 8
Total load, definition of........................ 8
Total organism count, definition of.............. 5
Total recoverable, definition of................. 8
Total sediment discharge, definition of.......... 7
Troy Meadows 1 observation well.................. 293
Tuckahoe River at Head of River.................238,256
Two Bridges, Passaic River at.................... 61

Union County, ground-water levels................ 304
Upper Cold Brook near Pottersville............... 143
Upper Saddle River, Saddle River at.............240.244
Ursino Lake, Elizabeth River at, at Elizabeth... 95

Van Syckel, Mulhockaway Creek at................. 116
Vernon, Black Creek near......................... 35,239
Verona, Peckman River at Ozone Avenue at......... 244
Village 215 observation well..................... 286

Wading River, West Branch at Maxwell............. 224

PAGE

  near Jenkins.................................... 223
Wallkill River at Franklin....................... 30,239
  at Outflow of Lake Mohawk at Sparta............ 239
  near Sussex..................................... 32
Walnut Brook near Flemington..................... 245
Wanaque, Wanaque River at........................ 66
  Reservoir....................................... 92
Wanaque Reservoir diversions..................... 94
Wanaque River at Awosting........................ 64
  at Monks.. 65
  at Wanaque...................................... 66
Watchung, East Branch Stony Brook at Best Lake at.. 175
  Stony Brook at.................................. 176
Water Quality Records, explanation of............ 12
Water temperature, explanation................... 13
Weighted average, definition of.................. 8
Wescoatville, Hammonton Creek at................. 214
West Nyack, NY, Hackensack River at.............. 36
  diversions...................................... 43
West Orange, West Branch Rahway River at......... 98
Westecunk Creek at Stafford Forge................ 208
Weston, Millstone River at....................... 169
Westwood, Musquapsink Brook at................... 243
  Musquapsink Brook near.......................... 243
  Pascack Brook at................................ 40
Wet mass, definition of.......................... 4
Weymouth, Deep Run at............................ 242
  Great Egg Harbor River at....................... 236
Wharton, Green Pond Brook at..................... 50
Whippany River at Morristown..................... 55
  near Pine Brook................................. 58,239
Whitehouse, Rockaway Creek at.................... 146
  South Branch Rockaway Creek at.................. 145
White Lab 3 observation well..................... 305
Wildcat Branch at Chesilhurst.................... 248
Willow Brook near Holmdel........................ 194
Winslow WC 5 observation well.................... 271
Wolf Creek at Ridgefield........................239,243
Woodcliff Lake................................... 42
WDR, definition of............................... 8
WSP, definition of............................... 8

Yellow Brook at Colts Neck....................... 195

Zooplankton, definition of....................... 6

October 1, 1978

FACTORS FOR CONVERTING INCH-POUND UNITS TO INTERNATIONAL SYSTEM UNITS (SI)

The following factors may be used to convert the inch-pound units published herein to the International System of Units (SI). This report contains both the inch-pound and SI unit equivalents in the station manuscript descriptions.

Multiply inch-pound units	By	To obtain SI units
	Length	
inches (in)	$2.54x10^{1}$	millimeters (mm)
	$2.54x10^{-2}$	meters (m)
feet (ft)	$3.048x10^{-1}$	meters (m)
miles (mi)	$1.609x10^{0}$	kilometers (km)
	Area	
acres	$4.047x10^{3}$	square meters (m^{2})
	$4.047x10^{-1}$	square hectometers (hm^{2})
	$4.047x10^{-3}$	square kilometers (km^{2})
square miles (mi^{2})	$2.590x10^{0}$	square kilometers (km^{2})
	Volume	
gallons (gal)	$3.785x10^{0}$	liters (L)
	$3.785x10^{0}$	cubic decimeters (dm^{3})
	$3.785x10^{-3}$	cubic meters (m^{3})
million gallons	$3.785x10^{3}$	cubic meters (m^{3})
	$3.785x10^{-3}$	cubic hectometers (hm^{3})
cubic feet (ft^{3})	$2.832x10^{1}$	cubic decimeters (dm^{3})
	$2.832x10^{-2}$	cubic meters (m^{3})
cfs-days	$2.447x10^{3}$	cubic meters (m^{3})
	$2.447x10^{-3}$	cubic hectometers (hm^{3})
acre-feet (acre-ft)	$1.233x10^{3}$	cubic meters (m^{3})
	$1.233x10^{-3}$	cubic hectometers (hm^{3})
	$1.233x10^{-6}$	cubic kilometers (km^{3})
	Flow	
cubic feet per second (ft^{3}/s)	$2.832x10^{1}$	liters per second (L/s)
	$2.832x10^{1}$	cubic decimeters per second (dm^{3}/s)
	$2.832x10^{-2}$	cubic meters per second (m^{3}/s)
gallons per minute (gal/min)	$6.309x10^{-2}$	liters per second (L/s)
	$6.309x10^{-2}$	cubic decimeters per second (dm^{3}/s)
	$6.309x10^{-5}$	cubic meters per second (m^{3}/s)
million gallons per day	$4.381x10^{1}$	cubic decimeters per second (dm^{3}/s)
	$4.381x10^{-2}$	cubic meters per second (m^{3}/s)
	Mass	
tons (short)	$9.072x10^{-1}$	megagrams (Mg) or metric tons